

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: John Maples Examiner #: 62294 Date:
 Art Unit: 7745 Phone Number 30 Serial Number: 10/082,846
 Mail Box and Bldg/Room Location: Rem 6-C89 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Consecutively wound or stacked battery cells

Inventors (please provide full names): Longhi and Munshi

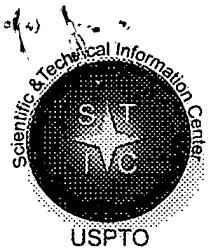
Earliest Priority Filing Date: _____

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Searcher: Leah Henderson
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 Date Completed: 1/10/05
 Searcher Prep & Review Time: 20
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 Online Time: 180

Type of Search	Vendors and cost where applicable
NA Sequence (#)	STN _____
AA Sequence (#)	Dialog <u>\$610, 94</u> _____
Structure (#)	Questel/Orbit _____
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Litigation	Lexis/Nexis _____
Fulltext	Sequence Systems _____
Patent Family	WWW/Internet _____
Other	Other (specify) _____



STIC Search Report

EIC 1700

STIC Database Tracking Number: 10/082946

TO: John Maples
Location: REM 6C89
Art Unit : 1745
January 10, 2005

Case Serial Number: 10/082946

From: Les Henderson
Location: EIC 1700
REM 4B28 / 4A30
Phone: 571-272-2538

Leslie.henderson@uspto.gov

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact **the EIC searcher or contact:**

**Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28**

Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:* Example: 1713

➤ *Relevant prior art found, search results used as follows:*

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

Comments:

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Enter your Contact Information below:**Name:**

John Maples

Employee Number: 62294**Phone:**

2-1287

Art Unit or Office: 1745**Building & Room Number:**

Remsen 6-C89

Enter the case serial number (Required): 10/082,946

If not related to a patent application, please enter NA here.

Class / Subclass(es) 29/623.1**Earliest Priority Filing Date:** February 26, 2002**Format preferred for results:**

Paper Diskette E-mail

Provide detailed information on your search topic:

- In your own words, describe in detail the concepts or subjects you want us to search.
- Include synonyms, keywords, and acronyms. Define terms that have special meanings.
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- Provide examples or give us relevant citations, authors, etc., if known.

- FAX or send the **abstract, pertinent claims** (not all of the claims), **drawings, or chemical structures** to your EIC or branch library.

Enter your Search Topic Information below:

A method of making a battery by
-wrapping a plurality of turns of a battery to make a wound
battery cell,
-cutting the wound cell to create a stacked battery cell,
-removing a portion of the length of the stacked battery cell to
adjust the amperage capacity of the stacked battery cell.

Special Instructions and Other Comments:

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1.-64. (Cancelled).

65. (Original) A method comprising:

wrapping a plurality of turns of a battery cell to make a wound battery cell;

cutting the wound battery cell to create a stacked battery cell, the amperage capacity of the stacked battery cell based on a length of the stacked battery cell; and

removing a portion of the length of the stacked battery cell to adjust the amperage capacity of the stacked battery cell.

66. (Original) The method as defined in claim 65 wherein wrapping a plurality of turns of the battery cell to make the wound battery cell further comprises wrapping the plurality of turns of the battery cell around a substantially cylindrical mandrel thus creating a substantially cylindrical shaped wound battery cell. *Apresy*

67. (Original) The method as defined in claim 66 wherein wrapping the plurality of turns of the first battery cell around a cylindrical mandrel further comprises wrapping the plurality of turns of the first battery cell around a mandrel having a diameter of at least two feet.

68. (Original) The method as defined in claim 67 wherein wrapping the plurality of turns of the battery cell around a mandrel having a diameter of at least two feet further comprises wrapping a plurality of turns of the first battery cell around the mandrel having a diameter of at least two feet and less than five feet.

69. (Original) The method as defined in claim 68 wherein wrapping the plurality of turns of the battery cell around the mandrel having a diameter of at least two feet and less than five feet further comprises wrapping the battery cell around the mandrel having a diameter of approximately three feet.

70. (Original) The method as defined in claim 66 wherein cutting the wound battery cell to create a stacked battery cell further comprises:

cutting the substantially cylindrical shaped wound battery cell on one side substantially parallel with an axis of the cylindrical shape; and

laying the cut substantially cylindrical shaped wound battery to be substantially flat to become the stacked battery cell with a circumference of the cylindrical shape becoming the length of the stacked battery cell.

71-74. (Cancelled).

75. (Original) A method comprising:

wrapping a plurality of turns of a first battery cell;

wrapping a plurality of turns of a second battery cell around the first battery cell to make a consecutively wound battery system;

cutting the consecutively wound battery system to create a stacked battery system, the amperage capacity of each cell of the stacked battery system based on a length of the stacked battery system; and

removing a portion of the length of the stacked battery system to adjust the amperage capacity each cell of the stacked battery system.

76. (Original) The method as defined in claim 75 wherein the wrapping steps further comprise:

wrapping the plurality of turns of the first battery cell around a substantially cylindrical mandrel; and

wrapping the plurality of turns of the second battery cell around the first battery cell, thus creating a substantially cylindrical shaped wound battery system.

77. (Original) The method as defined in claim 76 wherein wrapping the plurality of turns of the first battery cell around a substantially cylindrical mandrel further comprises wrapping the plurality of turns of the first battery cell around a mandrel having a diameter of at least two feet.

78. (Original) The method as defined in claim 77 wherein wrapping the plurality of turns of the first battery cell around a mandrel having a diameter of at least two feet further comprises wrapping a plurality of turns of the first battery cell around the mandrel having a diameter of at least two feet and less than five feet.

79. (Original) The method as defined in claim 78 wherein wrapping the plurality of turns of the first battery cell around the mandrel having a diameter of at least two feet and less than five feet further comprises wrapping the battery cell around the mandrel having a diameter of approximately three feet.

80. (Original) The method as defined in claim 75 wherein cutting the wound battery system to create a stacked battery system further comprises:

cutting the substantially cylindrical shaped consecutively wound battery system on one side substantially parallel with an axis of the cylindrical shape; and

laying the cut substantially cylindrical shaped consecutively wound battery system to be substantially flat to become the stacked battery system with a circumference of the cylindrical shape becoming the length of the stacked battery cell.

81.-87. (Cancelled)

88. (Previously Presented) The method of claim 65, further comprising, prior to cutting and removing, winding a second battery cell a plurality of turns around the wound battery cell.

89. (Previously Presented) The method of claim 88, wherein winding the second battery cell a plurality of turns around the wound battery cell comprises winding the second battery cell a plurality of turns around the wound battery cell where the wound battery cell produces a first voltage and the second battery cell produces a second voltage.

90. (Previously Presented) The method of claim 88, further comprising coupling the wound and second battery cells in series.

91. (Previously Presented) The method of claim 88, further comprising coupling the wound and second battery cells in parallel.

92. (Previously Presented) The method of claim 88, further comprising, prior to cutting and removing, winding a third battery cell a plurality of turns around the second battery cell.

93. (Previously Presented) The method of claim 92, further comprising coupling the wound, second and third battery cells in series.

94. (Previously Presented) The method of claim 92, further comprising coupling the wound, second and third battery cells in parallel.

95. (Previously Presented) The method of claim 92, further comprising coupling two of the first, second or third battery cells in parallel.

96. (Previously Presented) The method of claim 75, further comprising coupling the first and second battery cells in series.

97. (Previously Presented) The method of claim 75, further comprising coupling the first and second battery cells in parallel.

98. (Previously Presented) The method of claim 75, further comprising winding a third battery cell a plurality of turns around the second battery cell.

99. (Previously Presented) The method of claim 98, further comprising coupling the first, second and third battery cells in series.

100. (Previously Presented) The method of claim 98, further comprising coupling the first, second and third battery cells in parallel.

101. (Previously Presented) The method of claim 98, further comprising coupling two of the first, second or third battery cells in parallel.

ABSTRACT

The specification discloses a consecutively wound or stacked battery system and a method for making these devices. In one aspect, battery cells are wound consecutively, separated by insulating layers, to form an integral battery system capable of producing multiple voltages. In a second, but related, aspect, multiple battery cells are wound consecutively on a large diameter mandrel, cut in a radial plane, and laid flat to form stacked battery systems capable of producing multiple voltages. Whether remaining in the consecutively wound configuration, or being cut to become a stacked cell configuration, each cell in these configurations may be selectively coupled to other cells within its consecutive winding or stack to produce desired output voltages and current ratings. In the case of the stacked battery system, this battery system may be selectively cut to provide amperage capacities to order. Moreover, the consecutively wound or stacked battery systems may also include capacitors, fuel cells, and the like, wound in the same fashion.

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 (c) 2005 Thomson Derwent

File 399:CA SEARCH(R) 1967-2004/UD=14203
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Set	Items	Description
S1	930196	FUELCELL? OR BATTERY? OR BATTERIES? OR (FUEL? OR ELECTROCH- EM? OR ELECTRO(W) (CHEM? ? OR CHEMICAL?) OR GALVAN? OR ELECTRO- LY? OR SECONDAR? OR PRIMAR?) (2N) CELL? OR FC OR SOFC OR DFC OR PEMF
S2	2920503	COIL? OR SPIRAL? OR HELIX? OR GYRE? OR SWIRL? OR TUBUL? OR TUBELIKE? OR CYLIND?
S3	38796	S1 AND S2
S4	1742	(WOUND OR WINDS OR WRAP? OR COIL? OR CURLED OR ROLLED) (2N)- (BATTERY OR BATTERIES)
S5	1280	S4 AND S3
S6	10512	(MULTI OR MULTIPL? OR PLURAL? OR THREE OR MANY OR NUMEROUS? OR SEVERAL? OR FEW OR MULTIFOLD? OR MANIFOLD? OR MULTITUD?) (- 2N) (TURNS OR WINDINGS)
S7	2	S5 AND S6
S8	3	S4 AND S6
S9	42	S3 AND S6
S10	42	S1 AND S2 AND S6
S11	42	S9 OR S10
S12	43	S11 OR S8
S13	52776	MANDREL?
S14	1	S12 AND S13
S15	103040	(MULTI OR MULTIPL? OR PLURAL? OR THREE OR MANY OR NUMEROUS? OR SEVERAL? OR FEW OR MULTIFOLD? OR MANIFOLD? OR MULTITUD?) (- 2N) (CELL OR CELLS)
S16	11933	S15 AND S1
S17	7	S16 AND S6
S18	19	S6 AND S15
S19	5478	LENGTH? (3N) (VOLT? OR AMP? ? OR AMPERAG?)
S20	1	S19 AND S6 AND S1

S21 12 S3 AND S19
 S22 264 S13 AND S1
 S23 116 S22 AND S2
 S24 1 S23 AND S4
 S25 0 S23 AND S6
 S26 0 S23 AND S19
 S27 3497248 STACK? OR PILED OR SERIES OR PARALLEL
 S28 65465 S27 AND S1
 S29 5093 S27 AND S3
 S30 6739 (STACK? OR PILED OR SERIES OR PARALLEL) (2N) (BATTERY OR BATTERIES)
 S31 0 S30 AND S19
 S32 2236631 VOLT? OR AMP? ? OR AMPERAG?
 S33 2099952 LENGTH?
 S34 18 S30 AND S32 AND S33
 S35 0 S12 AND S30
 S36 0 S34 AND (S4 OR S6)
 S37 11 S12 AND S27
 S38 1280 S4 AND S2
 S39 0 S S38 AND S19
 S40 242 S38 AND S32
 S41 2 S40 AND S33
 S42 10 S40 AND S30
 S43 0 S34 AND (CUT OR CUTS)
 S44 3 S1 AND S4 AND S6
 S45 292 S5 AND S27
 S46 0 S45 AND S43
 S47 6 S45 AND S33
 S48 1210480 DIAMETER? OR DIAM
 S49 26 S5 AND S48
 S50 219020 FEET OR FOOT
 S51 2 S5 AND S50
 S52 2 S3 AND S51
 S53 2 S51 OR S52
 S54 292 S27 AND S5
 S55 0 S54 AND S6
 S56 11 S12 AND S27
 S57 113 S8 OR S12 OR S14 OR S17 OR S18 OR S20 OR S21 OR S24 OR S34
 OR S37 OR S41 OR S42 OR S44 OR S47 OR S53 OR S56
 S58 113 RD S57 (unique items)
 ? t s58/7,de/1-113

58/7,DE/1 (Item 1 from file: 2)
 DIALOG(R)File 2:INSPEC
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8099892 INSPEC Abstract Number: A2004-21-4110D-001, B2004-10-5120-005
 Title: The effect of the internal resistance of a *battery*** on the
 magnetic field of a *coil***
 Author(s): Seok-In Hong; Je-Young Choi
 Author Affiliation: Dept. of Sci. & Educ., Gyeongin Nat. University of Educ.,
 Incheon, South Korea
 Journal: Sae Mulli vol.48, no.3 p.213-15
 Publisher: Korean Phys. Soc,
 Publication Date: March 2004 Country of Publication: South Korea
 CODEN: NWPYA4 ISSN: 0374-4914
 SICI: 0374-4914(200403)48:3L.213:EIRB;1-F
 Material Identity Number: D446-2004-004
 Language: Korean Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: When a *coil*** with *multiple*** *turns*** is connected to a *battery*** instead of a constant-current source, we discuss and show by experiments how the magnetic field produced by the *coil*** depends on the number of turns of the *coil*** and the internal resistance of the *battery***. (6 Refs)

Subfile: A B

Descriptors: cells (electric); *coils***; electric resistance; magnetic fields

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58/7,DE/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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02531102 INSPEC Abstract Number: B85058909

Title: Development of an ultrathin solar *battery*** clock, 'CRESCO'

Author(s): Matsumoto, A.; Yamada, T.; Onkura, T.

Author Affiliation: Matsushita Electr. Works, Osaka-fu, Japan

Journal: Matsushita Electric Works Technical Report no.30 p.46-50

Publication Date: Feb. 1985 Country of Publication: Japan

CODEN: MDGID8 ISSN: 0285-5054

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Practical (P); Product Review (R)

Abstract: Based on the premise that clocks should offer precision, operate with minimal power consumption, and be as compact as possible, the authors undertook the development of their CRESCO *series***. The use of quartz had made adequate precision possible but clocks still required *battery*** replacement once a year and could not be made less than 20 mm in depth, which included the 14.5 mm necessary to accommodate the movement section (equivalent to the diameter of the *battery***). To improve on these points, an ultrathin movement has been developed which can operate for three years on one wristwatch *battery***. The movement *coil***, which has prevented the designing of a thinner clock, was shaped into a loop form and a loop-type stepping motor, with a small *coil*** diameter and large operating *length***, was developed. In addition, 30-second hand movement was employed and a harmonic-type reduction gear was developed to coordinate the minute and hour hand speeds. These developments made possible the creation of an ultrathin 5.8 mm and very efficient movement resulting in a total clock depth of less than 10 mm. The movement was also designed to utilize energy from a solar *battery*** composed of rectangular solar cells, which allows the secondary *battery*** to be used for seven years.

(0 Refs)

Subfile: B

Descriptors: clocks; solar cells; stepping motors

58/7,DE/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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00612715 INSPEC Abstract Number: B74009290

Title: Electrical testing of spark plugs, plug parameters of influence on the ignition system and its functional capacity

Author(s): Wittmann, E.

Author Affiliation: Elektrokeramische Werke Sonneberg, West Germany

Journal: Hermsdorfer Technische Mitteilungen vol.13, no.36 p. 1136-44

Publication Date: May 1973 Country of Publication: East Germany
CODEN: HTMTAN ISSN: 0439-0377

Language: German Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: Complete tests are described to cover: (a) dependence of ignition voltage requirement on pressure between electrodes; (b) dependence of ignition *voltage*** requirement on *length*** of spark gap; (c) resistance to flashover of various forms of plug insulator shaft; (d) breakdown voltages; (e) insulation resistance at temperatures up to 1000 degrees C; (f) effects of short-circuit resistance of a plug on voltage loss of an ignition *coil***. A transistor circuit was used for the circuit contact breaker in the primary circuit as it possessed advantages compared with the normal *battery*** ignition system although more sensitive to short-circuits and capacitive effects. Oscillograms and graphs illustrate the text. The tests are designed to be carried out during development and production of spark plugs. (0 Refs)

Subfile: B

Descriptors: electric ignition; flashover; insulation testing; internal combustion engines; spark gaps

58/7,DE/4 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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1081564 NTIS Accession Number: DE84000375

Improved Generator for Use with Low-Speed Rotating Machines. Final Report
Goerz, J. W.

Goerz (Jerry W.), Lexington, KY.

Corp. Source Codes: 079462000; 9516720

Sponsor: Department of Energy, Washington, DC.

Report Number: DOE/R4/10249-T1

31 Mar 83 17p

Languages: English

Journal Announcement: GRAI8405; NSA0900

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NTIS Prices: PC A02/MF A01

Country of Publication: United States

Contract Number: FG44-80R410249

The goal of this project was to construct a low-technology, maintenance-free dc electrical generator suited for use with low-speed rotating machines such as windmills or waterwheels. The generator consists of permanent magnets affixed to the circumference of the rotating device, and stationary *coils*** mounted on a semicircular frame. As the device rotates, the magnets move past the *coils*** and magnetically induce an ac voltage in the *coils***. This voltage is rectified and stored in a *battery***. No gears, belts, or brushes are used, so the generator operates quietly and without maintenance. The purpose of mounting the magnets at the circumference of the rotating device is to achieve high relative velocities between magnets and *coils*** even at slow rotations, in the hope of extracting energy from very light winds or slowly flowing water. Such a generator was constructed as part of a ten-*foot***-diameter windmill to test the concept. The generator easily reaches charging voltages at low speeds, and operates quietly without mechanical wear. But the charging current is very low in comparison to a wind turbine of conventional design. The experiment allows fundamental design problems to

be identified. (ERA citation 09:000468)

Descriptors: *Wind Turbines; Design; Electric *Batteries***; Electric *Coils***; Electric Generators; Performance; Rectifiers

58/7,DE/5 (Item 1 from file: 35)

DIALOG(R)File 35:Dissertation Abs Online

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01939302 AADAAI3084785

Electrochemical-thermal modeling of lithium-ion batteries

Author: Gomadam, Parthasarathy Manavala

Degree: Ph.D.

Year: 2003

Corporate Source/Institution: University of South Carolina (0202)

Major Professor: John W. Weidner

Source: VOLUME 64/03-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 1367. 143 PAGES

Descriptors: ENGINEERING, CHEMICAL ; ENGINEERING, MECHANICAL

The primary objective of this thesis is to understand the interaction between the electrochemical and thermal behaviors of Li-ion batteries, which make excellent candidates for electric vehicle propulsion. Among different designs of Li-ion *batteries***, the *spirally*** *wound*** design provides the maximum energy and power densities by using minimum accessories. However, because of their low surface area to volume ratio, the *spirally*** *wound*** *batteries*** retain more heat, posing safety problems when used in large sizes. Therefore, an electrochemical-thermal model is developed in this thesis for a *spirally*** *wound*** Li-ion *battery***, which will make a valuable tool in solving the thermal issues involved. The thermal part is a new one-dimensional energy balance developed from first-principles to describe heat-transport in *spiral*** geometries. The one-dimensional thermal model saves a great deal of computational time and effort when compared to the existing rigorous two-dimensional model. The thermal model is then coupled to the electrochemical part, which includes charge and material balances in the electrode and electrolyte phases of the Li-ion battery. The coupled electrochemical-thermal model is used in optimizing the design of a *spirally*** *wound*** Li-ion *battery***, thereby demonstrating an application of the thermal model developed here for *spiral*** geometries. The state-of-charge dependent reversible heat generated—a key unknown parameter in the battery chosen—is estimated by comparing the predictions of the electrochemical model with measured *voltage***-time and temperature-time data obtained from an 18650-type Li-ion battery. Then, keeping constant all parameters other than the *spiral*** *length*** of the battery and its outer temperature of operation, these parameters are optimized to produce the maximum energy density in a *spirally*** *wound*** Li-ion *battery*** operating within a specified safety limit in temperature.

58/7,DE/6 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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05744486 JICST ACCESSION NUMBER: 04A0290885 FILE SEGMENT: JICST-E
Development of Stationary VRLA Battery(Front Terminal Type), Type MFT

Series

KITAMI TOSHIO (1); YAMAMURA MASAO (1); NAGAYASU TATSUO (1)

(1) Yuasa Corp., JPN

Yuasa Jiho(Yuasa-Jiho), 2004, NO.96, PAGE.9-13, FIG.12, TBL.2, REF.3

JOURNAL NUMBER: S0857AAA ISSN NO: 0513-6342

UNIVERSAL DECIMAL CLASSIFICATION: 621.355

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Recently the telecommunication equipment is being standardized to a 19 or 23-inch rack mainly in Europe, so the demand for the VRLA batteries of which terminals are located on the front side of the battery is growing in the market for easy installation and maintenance in these racks. We have therefore developed a VRLA *battery*** (MFT *series***) to meet this demand. 4 sets of this battery can be installed in the 19 or 23-inch rack side by side, and maintained easily. This paper discusses the construction characteristics and performance of this VRLA battery. (author abst.)

DESCRIPTORS: lead-acid battery; product development; rack; terminal(electric parts); electrode; separator(plate); glass fiber; setting(mounting); electric discharge; *voltage***; time course; battery capacity; energy density; lifetime; ABS resin; morphology; *length***

BROADER DESCRIPTORS: secondary battery; chemical cell; battery; development ; special gear; gear; machine element; contact part; parts; plate classified by application; plate(material); inorganic man made fiber; man-made fiber; fiber; high temperature fiber; operation(processing); variation; capacity; density; multi-component copolymer; copolymer; polymer; thermoplastic; plastic; geometric quantity

58/7,DE/7 (Item 2 from file: 94)

DIALOG(R) File 94:JICST-EPlus

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05471250 JICST ACCESSION NUMBER: 03A0442535 FILE SEGMENT: JICST-E

The points of energy-saving design from the viewpoint of recent application examples. Example 5. The energy-saving design of high-voltage inverter.

UEDA YOZO (1); OYAMA TETSUO (1); SAKASE KIYOKI (1)

(1) Yasukawadenki Shisutemuenjiniaringujigyobu Shisutemugijutsu

Kikai Sekkei(Machine Design), 2003, VOL.47,NO.8, PAGE.20-21, FIG.4

JOURNAL NUMBER: G0863AAL ISSN NO: 0387-1045

UNIVERSAL DECIMAL CLASSIFICATION: 621.314.5

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

ABSTRACT: In this paper, the points of energy-saving design is introduced, by an example of high-voltage inverter VS-686HV5SD, which realized, by adoption of serial multiple PMW control, an efficiency of 98% and power factor of 95% or more. To begin with, in having the inverter itself of the type enabling output of high voltage, the output current was lowered, so that the internal loss of inverter was reduced. Next, in arranging *multi***-layered *windings***, whose number is equal to the number of power *cells*** of *secondary*** side, at the transformer of input side, the windings were made to have a phase difference between each of them, so that the higher harmonics arising in the input current are canceled out, causing the loss due to higher harmonics to be reduced. Moreover, in having power cells connected in the manner of multi-stage serial connection, the wave form of output voltage was made

nearer to sinusoidal wave, so that the carrier frequency for PMW control was lowered, causing the switching loss to be reduced. The power consumption of the case where a middle- or large-sized pump, intermittently requiring water flow, is controlled only by start/stop of this inverter, is compared with the case where the control is done by open/close of valve while pump is running, so that the energy-saving effect of this inverter is shown.

DESCRIPTORS: power converter; high voltage; energy saving; electric design; output; electric current; electrical loss; winding(*coil**); sine wave; PWM control; consumed electric power; pump classified by application

BROADER DESCRIPTORS: electric converter; converter; voltage; saving; design; input-output; loss; waveform; electric quantity control; control; electric power; pump; fluid machinery; machinery

58/7,DE/8 (Item 3 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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03043376 JICST ACCESSION NUMBER: 97A0137192 FILE SEGMENT: JICST-E
Cochlea Morphological Changes over of Time after the Introduction of
Bacterial Endotoxin into the Middle Ear.

WATANABE KENSUKE (1); HAKUHISA HIROKO (1)

(1) Dokkyo University Sch. of Med., Koshigaya Hosp.

Nippon Jibi Inkoka Gakkai Kaiho (Journal of Otolaryngology of Japan), 1996,
VOL.99, NO.12, PAGE.1738-1745, FIG.13, TBL.1, REF.15

JOURNAL NUMBER: Z0669AAW ISSN NO: 0030-6622

UNIVERSAL DECIMAL CLASSIFICATION: 615.91:579 591.185.5.05+591.485

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Guinea pigs weighing 350g each were used in this experiment. A small piece of Gelform containing 0.04mg of E. coli-derived endotoxin was set on the round window 24 hours after intraperitoneal injection of 0.02mg endotoxin. Morphological changes in the cochlea were observed at 24 hours (previous report), 48 hours, 72 hours and 7 days after the introduction of the endotoxin into the middle ear. As the results of the morphological changes of cochlea at 24 hours after the introduction of the endotoxin were reported in previous paper we present only an outline of these. Inflammatory cell infiltration and bleeding were observed in both endolymphatic and perilymphatic spaces. Inflammatory cells also infiltrated the stria vascularis, spiral ligament, spiral prominence and organ of Corti. Almost all of the inflammatory cells were neutrophils. Blood sludge was observed in all of the stria capillaries of the upper *three*** *turns***. The hair cells were intact in every turn except for having small vacuoles. Intermediate cells and marginal cells of the stria vascularis were shrunken. At 48 hours after the introduction of the endotoxin into the middle ear, the changes in the stria vascularis were almost the same as at 24 hours. However the infiltrated inflammatory cells changed from neutrophils to macrophages. Macrophages had phagocytosed many neutrophils. The hair *cells*** had *many*** large vacuoles. At 72 hours, the enlargement of the intercellular space in the stria vascularis disappeared and damage to the hair *cells*** decreased although *many*** macrophages were still observed. At 7 days, the cochlea was morphologically normal.
(author abst.)

DESCRIPTORS: guinea pig; animal test; middle ear; endotoxin; local administration; cochlea; time course; stria vascularis; Corti organ;

optical microscopy; inflammation; hair cell; electron microscopy
BROADER DESCRIPTORS: Rodentia; Mammalia; Vertebrata; animal; experiment;
auditory organ; sense organ; bacterial toxin; microorganism toxin;
poison; toxic substance; matter; administration route;
administration(biology); internal ear; variation; microscopy;
observation and view; disease; cell(cytology)

58/7,DE/9 (Item 1 from file: 103)
DIALOG(R)File 103:Energy SciTec
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05089018 INIS

Title: Fates of clustered DNA damages in human cells
Author(s): Sutherland, B.M.; Bennett, P.V. [Brookhaven National Laboratory
(United States)]; Sutherland, J.C. [Brookhaven National Laboratory
(United States)]; [East Carolina University, (United States)]; Laval,
J. [Institut Gustav Roussy, (France)]

Corporate Source: International Association for Radiation Research
(International Organisation without Location); Australian Institute of
Nuclear Science and Engineering (AINSE), Lucas Heights, NSW (Australia)

Conference Title: ICRR 2003: 12. Quadrennial Congress of the International
Association for Radiation Research

Conference Location: Australia

Publisher: AINSE

Source: ICRR 2003: 12. Quadrennial Congress of the International
Association for Radiation Research, Brisbane, QLD (Australia), 17-22
Aug 2003 ; PBD: 2003 ; In: 12th Quadrennial Congress of the
International Association for Radiation Research incorporating the 50th
Annual Meeting of Radiation Research Society, RANZCR Radiation Oncology
Annual Scientific Meeting and AINSE Radiation Science Conference, 414
pages.

Publication Date: 20030701

Availability Date: 20040628

Report Number(s): NONE

OSTI Number(s): DE20472112

Contract Number (Non-DOE): TRN AU0423161047254

Language: English

Medium/Dimensions: page(s) 56

Availability: Available in abstract form only, full text entered in this
record

Abstract: Bistranded damage clusters-two or more oxidized bases, abasic
sites or strand breaks on opposing DNA strands within a *few*** helical
*turns***-are induced in human cells (28SC monocytes) by low doses of
ionizing radiation in a linear dose-response. We have now asked if they
are repair-resistant, or if cellular repair mechanisms can cope with
such complex damages. We have studied repair in 28SC *cells*** of
*three*** types of clustered damages: Nfo-abasic clusters, Nth-oxidized
pyrimidine clusters, and Fpg-oxidized purine clusters as well as double
strand breaks (DSBs) induced by low (10-50 cGy) doses of 50 kVp X-rays.
DSBs disappear within a few minutes after irradiation. Abasic clusters
also disappear, but in a time frame of many hours; the kinetics of
their processing suggests that cells use active repair mechanisms to
remove abasic clusters. Oxidized base clusters remain detectable for
many hours, suggesting that a fraction of such damages may constitute
persistent clusters. Few de novo DSBs are induced during
post-irradiation incubation, indicating that-unlike E. coli-human cells
do not accumulate high levels of DSBs in their attempts to repair
non-DSB clustered damages. However, significant levels of de novo

abasic clusters and de novo oxidized base clusters are detected in cells incubated after irradiation, suggesting that they may constitute intermediates in repair of such clustered damages. Our results support a model of processing of clustered damages in human cells that minimizes long-term accumulation of double strand breaks but instead employs de novo cluster intermediates, including both abasic clusters and oxybase clusters.

Descriptors: ANIMAL CELLS; BIOLOGICAL RADIATION EFFECTS; BIOLOGICAL REPAIR; IONIZING RADIATIONS; LOW DOSE IRRADIATION; MOLECULAR CLUSTERS; OXIDATION; PURINES; PYRIMIDINES; STRAND BREAKS; TIME DEPENDENCE

58/7,DE/10 (Item 2 from file: 103)

DIALOG(R) File 103:Energy SciTec

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04532439 EDB-00-000214

Title: Electrical management of *spiral*** *wound*** VRLA *batteries*** in cycling applications

Author(s): Olson, J.B.

Title: Proceedings of the 33. intersociety energy conversion engineering conference

Author(s)/Editor(s): Anghaie, S. (ed.)

Corporate Source: Optima Batteries, Inc., Aurora, CO (United States)

Conference Title: 33rd Intersociety Energy Conversion Engineering Conference

Conference Location: Colorado Springs, CO (United States)

Conference Date: 2 Aug 1998 - 6 Aug 1998

Publisher: LaGrange Park, IL (United States) American Nuclear Society

Publication Date: 1998

p 6, Paper IECEC.98.295 ([2800] p)

ISBN: 0-89448-639-X

Note: 1 CD-ROM. Operating system required: Windows 3.x; Windows 95/NT; Macintosh; UNIX. All systems need 2X CD-ROM drive.

Language: English

Availability: American Nuclear Society, ANS Publications Department, 555 N. Kensington Avenue, LaGrange Park, IL 60526 (US) ANS Order No. 700262

Abstract: The need for effective electrical management of series strings of VRLA batteries in deep cycling applications is increasingly apparent from field observations, for example in electric vehicles. This appears particularly true in cases where the charging is *voltage*** limited. A popular management concept, increasing in use, is the bypass regulator. These function by providing a *voltage*** dependent current bypass to individual modules in a series string pack. Bypass regulators called the Run X Equalizer made by Gycom Batteriteknik AB (Sweden) were tested on three Optima Yellow Top[trademark] deep cycle *batteries*** in *series*** w2048three other Yellow Tops[trademark] without equalizers. The results showed a definite positive influence of the regulators in maintaining capacity and balance of the batteries so equipped. The equalizers were capable of balancing a battery purposely unbalanced by 2 Ah. Their efficacy appeared to be dependent upon the charge regime used. The bypass equalizers appeared most effective when the batteries were cycled with a charge profile that resulted in apparent undercharging of the batteries. Testing with a charge profile that fully charged the batteries did not reveal a positive effect of the equalizers.

Descriptors: ELECTRIC BATTERIES; BATTERY CHARGE STATE; BATTERY CHARGERS; CONTROL THEORY; ELECTRIC-POWERED VEHICLES

Broader Terms: ELECTROCHEMICAL CELLS; ELECTRICAL EQUIPMENT; VEHICLES;

EQUIPMENT

58/7,DE/11 (Item 3 from file: 103)
DIALOG(R) File 103:Energy SciTec
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03423360 CANM-92-0E4631; EDB-93-002236
Title: The Westinghouse solid oxide *fuel*** *cell*** program: A 1991
progress report
Author(s): Dollard, W.J.; Parker, W.G
Title: Transactions of the Engineering and Operating Division of the
Canadian Electrical Association
Corporate Source: Canadian Electrical Association, Montreal, PQ (Canada)
Publication Date: 1991
p 1-19, Paper 91-T-222 (1800 p)
Report Number(s): CEA-CE04265-Vol.30-Pts.1-4 CE--04265
Language: English
Availability: Canadian Electrical Association, One Westmount Square, Suite
1600, Montreal, PQ, CAN H3Z 2P9.

Abstract: A progress report is presented on the development of the
Westinghouse solid oxide *fuel*** *cell*** (*SOFC**) technology. The
*tubular*** *SOFC*** can cleanly and efficiently utilize fossil fuel
supplies and is currently in the preliminary design stage of
development with plans for field testing of multi-hundred kilowatt and
multi-megawatt generators during the early to mid-1990s. The *SOFC***
operates at atmospheric pressure at 1000[degree]C and thus has
potential for integral reforming of natural gas and direct utilization
of coal derived fuel gas. The *SOFC*** offers significant user benefits
which include: electrical efficiency greater than 50%; virtually
unlimited plant site selection as a result of low emissions and make-up
water requirements; factory manufactured modular packages which reduce
plant lead time, minimize site erection costs, permit high levels of
quality control, and enhance user planning flexibility; and enhanced
versatility through fuel adaptability and waste heat recoverability,
permitting either baseload or intermediate load all-electric power
plant operation or cogeneration plant operation. Recent developments
have demonstrated pre-pilot manufacturing, scaleup of cells to 78 cm
*length***, improved *voltage*** stability and life, direct fuelling
with natural gas, extremely high availability, low pollutant emissions
and low noise levels, detailed design and testing of a 20 kW module,
and commercialization of a 25 kW *SOFC*** system. 6 figs.

Major Descriptors: *HIGH-TEMPERATURE *FUEL*** *CELLS*** -- TECHNOLOGY
ASSESSMENT; *SOLID *ELECTROLYTE*** *FUEL*** *CELLS*** -- TECHNOLOGY
ASSESSMENT

Descriptors: *FUEL*** *CELL*** POWER PLANTS; RESEARCH PROGRAMS

Broader Terms: DIRECT ENERGY CONVERTERS; *ELECTROCHEMICAL*** *CELLS***;
*FUEL*** *CELLS***; POWER PLANTS

58/7,DE/12 (Item 4 from file: 103)
DIALOG(R) File 103:Energy SciTec
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00692986 EDB-81-001234
Author(s): Gold, C.M.
Title: Zener-diode-controlled battery charger (Patent)
Patent No.: US 3205422
Patent Assignee(s): Yardney International Corp.

Publication Date: 20 Feb 1961

p v

Language: English

Abstract: A battery-charging system comprises a source of direct current connectable across the terminals of an electrochemical battery, a circuit for connecting the source with the *battery***, a relay *coil***, and a Zener-type breakdown device. The circuit includes a switch in *series*** with the *battery*** and the source, the switch having a first position wherein the source is connected with the battery and a second position wherein the source is disconnected from it. The switch is operated by the relay *coil***. The breakdown device, which becomes conducting upon attainment of a predetermined battery *voltage***, is connected in series with the *coil*** and the switch for disconnecting the device from the battery. Upon breakdown the *coil*** is energized and the switch is moved from its first position to its second position;

Major Descriptors: *BATTERY CHARGERS -- DESIGN

Descriptors: AUTOMATION; ELECTRONIC CIRCUITS; JUNCTION DIODES; RELAYS; SWITCHES

Broader Terms: ELECTRICAL EQUIPMENT; EQUIPMENT; SEMICONDUCTOR DEVICES; SEMICONDUCTOR DIODES

58/7,DE/13 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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08016733

*BATTERY*** FEEDING INVERTER

PUB. NO.: 2004-129492 [JP 2004129492 A]

PUBLISHED: April 22, 2004 (20040422)

INVENTOR(s): HEIGL BERND
RIETHMUELLER JOERG
ZIEGLER BERND

APPLICANT(s): HILTI AG

APPL. NO.: 2003-334075 [JP 2003334075]

FILED: September 25, 2003 (20030925)

PRIORITY: 02 10245839 [DE 10245839], DE (Germany), October 01, 2002
(20021001)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a *battery*** powered inverter for a brushless electric motor that can effectively use a capacity of a *battery*** comprising *several*** *battery*** *cells***.

SOLUTION: The *battery*** powered inverter 1 for the brushless electric motor 2 having a *plurality*** of *windings*** 3a, 3b, 3c, wherein a feeding *battery*** 6 having a *plurality*** of *battery*** *cells*** 8 is connected to a feeding network 4a to a winding via two feeding conductors 5, and at least one second feeding network is connected to the *battery*** 6 via the feeding conductors 5. Preferably, inverter portions 9a, 9b, 9c constituted by a power semiconductor device for the windings 3a, 3b, 3c of the brushless electric motor 2 are respectively arranged in each feeding network 4a, 4b, 4c. Preferably, sensors are provided at each feeding network 4a, 4b, 4c, and the sensors are connected to a control means 14 that controls the inverter 1.

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58/7,DE/14 (Item 2 from file: 347)
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07976119

*BATTERY*** PROTECTIVE CIRCUIT

PUB. NO.: 2004-088878 [JP 2004088878 A]
PUBLISHED: March 18, 2004 (20040318)
INVENTOR(s): SATO TADASHI
YAMADA KATSUO
ITO NOBUAKI
MIZUTANI KOICHI
APPLICANT(s): FDK CORP
TOYOTA MOTOR CORP
APPL. NO.: 2002-244868 [JP 2002244868]
FILED: August 26, 2002 (20020826)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a *battery*** protective circuit capable of combining overcharge protection and/or overdischarge protection for a *plurality*** of *secondary*** *cells*** used in series connection and each function of a cell balance, and of attaining simplification and small-scale for a circuit configuration.

SOLUTION: This *battery*** protection circuit includes a cell balance circuit section 30 for equalizing an electromotive force between the *secondary*** *cells*** by redistributing the electromotive force of a *battery*** 10 in which the *plurality*** of *secondary*** *cells*** (unit *cells***) B1 to B3 are connected in series to the *secondary*** *cells*** B1 to B3 using a transformer 31 which includes a *plurality*** of secondary *windings*** L21 to L23; a switching circuit 50 which is intervened in a charge and discharge path of the *battery*** 10 in series and controls energization by the current direction; and an overcharge and overdischarge detecting means 40 for detecting which of an overcharge condition or an overdischarge condition exists in the *secondary*** *cell*** of the *battery*** 10. If the overcharge and overdischarge detecting means 40 detects the overcharge, a charging path is shut down. If the overcharge and overdischarge detecting means 40 detects the overdischarge, on the other hand, an overdischarging path is shut down. If the overcharge and overdischarge detecting means 40 detects either the overdischarge or the overcharge, the cell balance circuit section 30 is operated.

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07723767

WOUND ELECTRODE BODY AND NONAQUEOUS ELECTROLYTE SECONDARY *BATTERY***

PUB. NO.: 2003-217668 [JP 2003217668 A]
PUBLISHED: July 31, 2003 (20030731)

INVENTOR(s): KAGEYAMA MASAYUKI
 APPLICANT(s): SONY CORP
 APPL. NO.: 2002-013240 [JP 200213240]
 FILED: January 22, 2002 (20020122)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a nonaqueous electrolyte secondary *battery*** with high energy density.

SOLUTION: In the nonaqueous electrolyte secondary *battery***, a *wound*** electrode body 20 is stored in an outer case 10. In the wound electrode body 20, electrodes 1 and 2 with a mix layer mainly made of an active material formed on either surface of a band-shaped collector are layered via a band-shaped separator and wound round *many*** *turns*** *spirally***. The wound electrode body 20 is flat shaped, and the mix layer is not formed on a surface of one electrode which doesn't face the other electrode in an innermost wound layer 12. The mix layer is not formed on the surface facing the outer case 10 in an outermost wound layer 13 of the wound electrode body 20. Further, the shape of the opening of the outer case 10 is a rectangle whose short sides are rounded.

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07626600
 DRIVING METHOD FOR PLUNGER PUMP

PUB. NO.: 2003-120452 [JP 2003120452 A]
 PUBLISHED: April 23, 2003 (20030423)
 INVENTOR(s): KARASAWA TOSHIO
 HANASATO MAKI
 SHIYURA TATSUYA
 APPLICANT(s): MIKUNI CORP
 APPL. NO.: 2001-310812 [JP 2001310812]
 FILED: October 09, 2001 (20011009)

ABSTRACT

PROBLEM TO BE SOLVED: To suppress power consumption by ensuring stable discharge performance regardless of fluctuations in power voltage in driving a plunger pump.

SOLUTION: For the plunger pump 20 to suck and force-feed fuel by performing reciprocation with electromagnetic starting force generated by the energization of an electromagnetic *coil*** 24, in controlling pulse energization into the electromagnetic *coil*** 24 based on voltage supplied from a *battery*** 6, energization period for the electromagnetic *coil*** 24 is *lengthened*** when the *voltage*** of the *battery*** 6 is low, while the energization period for the electromagnetic *coil*** 24 is shortened when the voltage is high. Thus, stable discharge performance and power consumption suppression can be attained regardless of the voltage of the *battery*** 6.

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58/7,DE/17 (Item 5 from file: 347)
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07604353
CURRENT MONITOR

PUB. NO.: 2003-098199 [JP 2003098199 A]
PUBLISHED: April 03, 2003 (20030403)
INVENTOR(s): UESUGI NAOYOSHI
APPLICANT(s): TOSHIBA KYARIA KK
APPL. NO.: 2001-293351 [JP 2001293351]
FILED: September 26, 2001 (20010926)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a current monitor for monitoring the current of alternating current line which is capable of easily attaching for every body without especial work.

SOLUTION: Transformers (21 and 22) in which alternating current lines (13A and 13B) to be monitored of current value are penetrated as primary *coils*** in annular iron cores and second *coils*** of *plurality*** of *windings*** are provided in a state crossing with the annular iron cores are provided. Current monitor means (23 and 24) for taking signals corresponding to the current values out of the secondary *coils*** of the transformers and emitting alarm signals according to a specific emission manual when the signals increase to a value corresponding to the current close to the supply limit current of the alternating current lines are provided. A *battery*** (26) for supplying operation power to the current monitor means is provided.

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58/7,DE/18 (Item 6 from file: 347)
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07354148
MONOBLOCK BATTERY CASE FOR STORAGE BATTERY, AND STORAGE BATTERY USING THE SAME

PUB. NO.: 2002-222639 [JP 2002222639 A]
PUBLISHED: August 09, 2002 (20020809)
INVENTOR(s): SHIMODA KAZUHIKO
YOSHIHARA YASUYUKI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2001-018168 [JP 200118168]
FILED: January 26, 2001 (20010126)

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a storage battery and a monoblock battery case used for the storage battery, in which a *voltage*** drop in a current path is suppressed, with aiming to achieve a small size and lightweight by shortening the current path *length***, while radiating effectively heat

generated at the time of electricity charging/discharging, in the storage battery constituted with a plurality of cells.

SOLUTION: The monoblock battery container 11 for storage batteries is arranged with a plurality of unit battery containers 13, which consists of at least one cell, and is arranged so that a cell sequence is *parallel***. The monoblock *battery*** container for storage batteries and the storage battery using this, are constituted by providing with a common cell-sequence partition wall 14 on the upper part of the unit battery containers 13 which adjoin mutually, space parts 15 and 18 between the cell sequences in a lower part of the battery container, and 1st through-holes 16 for connecting between the cell sequences.

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58/7,DE/19 (Item 7 from file: 347)
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06975415

WINDING METHOD AND DEVICE FOR *SPIRAL*** ELECTRODE GROUP AND *BATTERY***
USING THE DEVICE

PUB. NO.: 2001-202986 [JP 2001202986 A]
PUBLISHED: July 27, 2001 (20010727)
INVENTOR(s): ISHIKAWA TERUHISA
TANAKA YASUSHI
NAKANOSE TAKEJI
OSAWA YOSHIKI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2000-338667 [JP 2000338667]
FILED: November 07, 2000 (20001107)
PRIORITY: 11-316736 [JP 99316736], JP (Japan), November 08, 1999
(19991108)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a winding device for a *spiral*** electrode group to be used for *battery***, enabling the winding of the electrode group with *few*** weaving *windings*** in the case of manufacturing electrode groups for such *battery*** as a lithium secondary *battery***, nickel-hydrogen *battery*** or the like, by lapping the electrode group via separator on the positive and negative plates of the *battery*** and by *spirally*** winding the same.

SOLUTION: The location of the edge of a band-type plate is detected by means of an edge detector at the prescribed point near the core having a hexagonal cross section. Based on the results of comparing it with the standard location, the band-type plate is pinched by a pair of fingers on the chuck, extending from the edge of the plate to both plate running and vertical directions, and the location of the edge of the plate can be corrected automatically by means of a chuck drive. While the plate then is always held by the chuck of which the movement is restricted only to a direction paralleling the plate movement direction, the plate edge is sent to the core, to complete the winding of the electrode group with adding a tension as well as preventing the shift of the plate by continuously holding it by the other chuck.

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58/7,DE/20 (Item 8 from file: 347)
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06917774
ROTATING ELECTRIC MACHINE FOR CARS

PUB. NO.: 2001-145311 [JP 2001145311 A]
PUBLISHED: May 25, 2001 (20010525)
INVENTOR(s): TOMOARI KEIICHIRO
APPLICANT(s): DENSO CORP
APPL. NO.: 11-328245 [JP 99328245]
FILED: November 18, 1999 (19991118)

ABSTRACT

PROBLEM TO BE SOLVED: To solve the difficulty of driving a rotating electric machine of large output for cars with an auxiliary drive system mounted in front of an engine while suppressing not only the increases of the dimension and weight of a power train but also the increase of car body vibration, and to achieve the system of a plurality of rotating electric machines required in systems including a dual-power-supply system while suppressing the increases of its mounting space and weight.

SOLUTION: This rear-mount rotating electric machine arranged on the same axis with a crank shaft 101 incorporates a rotor 250 having an inner rotor 220 and an outer one 230 that are electromagnetically coupled individually to both circumferential surfaces of a stator 210 of a roughly *cylindrical*** shape. Facing both rotors 220, 230 individually, two sets of *multiple***-phase *windings*** are wound on a common single stator core 211. This structure enables two *batteries*** 901, 902 of high and low capacities to be charged separately without extending the shaft of a power train and enlarging its size.

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58/7,DE/21 (Item 9 from file: 347)
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06897295
NON-INSULATED TYPE *VOLTAGE*** SENSOR

PUB. NO.: 2001-124805 [JP 2001124805 A]
PUBLISHED: May 11, 2001 (20010511)
INVENTOR(s): TAKEMOTO HISASHI
SATAKE SHUJI
APPLICANT(s): YAZAKI CORP
APPL. NO.: 11-302129 [JP 99302129]
FILED: October 25, 1999 (19991025)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a battery non-insulated type *voltage*** sensor for vehicle capable of accurately measuring *voltage*** without the use of a Hall element and is loose in the limitation of harness *length***.

SOLUTION: In this non-insulated type *voltage*** sensor provided between a battery 15 of 60 V or lower and a circuit having a resistor Rg connected to a wire harness 19 at one end and to a reference power source at the other end, a plurality of resistors are connected in series to one another and in *parallel*** to the *battery*** 15, and for a desired potential-dividing point of the plurality of resistors there are provided potential-dividing circuits Rd, Rf for obtaining *voltage*** equal to or lower than that of the reference power source and proportional to the terminal *voltage*** of the battery 15, a *voltage*** follower 18 for inputting the *voltage*** at the dividing point of the potential-dividing circuits, and a *voltage*** -current converting circuit 28 having an FET Q1 and causing a current proportional to a *voltage*** signal to flow into ground via a resistor Rh at an output of low-impedance having the same phase as the *voltage*** follower 18.

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58/7,DE/22 (Item 10 from file: 347)
 DIALOG(R)File 347:JAPIO
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06623975

CHARGING/DISCHARGING DEVICE FOR ELECTRIC POWER STORING MEANS AND
 MANUFACTURE OF ELECTRIC POWER STORING MEANS USING THE SAME

PUB. NO.: 2000-209786 [JP 2000209786 A]

PUBLISHED: July 28, 2000 (20000728)

INVENTOR(s): KUBO KENJI

NOMURA HISAHIRO

TOKUNAGA KIICHI

MIYAZAKI HIDEKI

EMORI AKIHIKO

APPLICANT(s): HITACHI LTD

APPL. NO.: 11-008824 [JP 998824]

FILED: January 18, 1999 (19990118)

ABSTRACT

PROBLEM TO BE SOLVED: To collectively charge a plurality of electric power storing means from an AC power source and collectively discharge the storing means to the power source by providing a plurality of power converters, one of the secondary windings of which are connected to the AC side of a transformer having secondary windings and the DC sides of which are respectively connected to a plurality of electric power storing means, to an AC power source.

SOLUTION: A *plurality*** of *windings*** are connected in series on the primary side of a transformer 2 and AC power source 1 is connected to both ends of the connected windings. In addition, the secondary-side outputs of the transformer 2 are respectively outputted to a *plurality*** of *cells*** through (n) sets of AC-DC converters 3. The AC power source 1 converts a DC voltage which is obtained by rectifying the AC voltage of three-phase commercial power supply 101 by means of a rectifier diode converter 102 and smoothing the rectified voltage by means of a smoothing capacitor 103 into an AC voltage having a desired frequency by means of a full-bridge converter 104. Then the power source 1 converts the AC voltage into a DC voltage and supplies charging currents to secondary *batteries***

4-6. The secondary-side currents of the transformer 2 are collectively controlled by means of the converter 104 by making the primary-side current of the transformer 2 coincident with a command value.

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58/7,DE/23 (Item 11 from file: 347)
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06343552

NON-CONTACT CHARGER

PUB. NO.: 11-285156 [JP 11285156 A]
PUBLISHED: October 15, 1999 (19991015)
INVENTOR(s): TAKEUCHI YASUO
APPLICANT(s): NIPPON ELECTRIC IND CO LTD
APPL. NO.: 10-103942 [JP 98103942]
FILED: March 30, 1998 (19980330)

ABSTRACT

PROBLEM TO BE SOLVED: To realize reduction in size and thickness by forming, in almost V- shape, a secondary core provided in the vehicle side to which a primary side coupler in the charger body side is inserted.

SOLUTION: A secondary core 1 of which external shape is set to almost V-shape is provided to a charge port of which inserting port is opened toward the external side of vehicle. Meanwhile, a thin-tongue type coupler 4 is provided to a primary side charger, the coupler 4 is provided with a primary side core 3, and a primary side *coil*** 31 is provided at the internal side of the core 3. In addition, a coupling portion provided in the vertical direction connecting the upper and lower surfaces is formed to the secondary core 1. The secondary *coil*** 11 partially winding *several*** *turns*** is provided and is then connected to the onboard *battery*** side. At the internal surface of the upper and lower surfaces facing to the inserting portion of the core 1, a disk type core projection is respectively formed to the corner areas at the center. As a result, reduction in size and thickness can be realized by reduction of width of secondary core and moreover reduction in width and thickness size of charge port.

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58/7,DE/24 (Item 12 from file: 347)
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06193604

CHARGING/DISCHARGING CURRENT DETECTING METHOD AND DEVICE OF SECONDARY BATTERY

PUB. NO.: 11-135156 [JP 11135156 A]
PUBLISHED: May 21, 1999 (19990521)
INVENTOR(s): KUDO AKIHIKO
SUGAWARA TORU
APPLICANT(s): SHIN KOBE ELECTRIC MACH CO LTD

APPL. NO.: 09-297434 [JP 97297434]
 FILED: October 29, 1997 (19971029)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a charging/discharging current detecting method of a secondary battery capable of correctly measuring charging/discharging current, even if it is a pulse current.

SOLUTION: Both end *voltage*** values of a current-detecting resistance 2 inserted in *series*** to a *battery*** is amplified with a differential amplifier 8, the output of the differential amplifier 8 is integrated every constant time with an analog integrator 16. A microcomputer 17 operates charging/discharging current with integrated *voltage*** values of the analog integrator 16. By integrating the operated current values and calculating the remaining capacity, the remaining capacity is displayed correctly. By shorting the current detecting resistance 2 every constant period with a switch 18, accurate zero point correction is made possible. When charging/discharging current is small, the integration time of the analog integrator 16 is *lengthened***.

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58/7,DE/25 (Item 13 from file: 347)
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06076805
 INTELLECTUAL CHARGING AC GENERATOR

PUB. NO.: 11-018316 [JP 11018316 A]
 PUBLISHED: January 22, 1999 (19990122)
 INVENTOR(s): ORINDOU LUCA JULIO DURELI
 APPLICANT(s): ORINDOU LUCA JULIO DURELI
 APPL. NO.: 10-178073 [JP 98178073]
 FILED: June 10, 1998 (19980610)
 PRIORITY: 102504 [AR 102504], AR (Argentina), June 10, 1997 (19970610)

ABSTRACT

PROBLEM TO BE SOLVED: To discharge all *batteries*** and enable perfect charging of all *batteries***, by making the number of turns of the respective *coils*** equal in order that the *coils*** may obtain equal voltages in the same slot.

SOLUTION: In an intellectual charging AC generator, windings are constituted in a Y type or a Δ type or single phase, and the windings are wound in *parallel***. The number of *parallel*** windings is equal to the number of *batteries*** which is 2, 3, 4, etc. Between *parallel*** *coils***, each winding has independently a rectifier plate, i.e., three positive diodes and three negative diodes, i.e., six diodes in total. In the case of a rectifier plate whose number of windings is two, two rectifier bridges are installed. In the case of a rectifier plate whose number of *windings*** is *three***, *three*** rectifier bridges are installed. *Batteries*** are connected in *series*** and in *parallel*** with the rectifier bridges. In the respective positive/negative junctions of the rectifier plate, the bridges are connected with the respective bridges of the *batteries*** corresponding to stator surfaces. As a result,

all the *batteries*** are discharged, overvoltage and liquid leakage, overheat, etc., which are to be caused by overvoltage are prevented, and all the *batteries*** can be charged.

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58/7,DE/26 (Item 14 from file: 347)
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05783176
 CHARGE PROTECTOR AND CHARGER

PUB. NO.: 10-066276 [JP 10066276 A]
 PUBLISHED: March 06, 1998 (19980306)
 INVENTOR(s): KANEKO TADASHI
 APPLICANT(s): JAPAN TOBACCO INC [000456] (A Japanese Company or Corporation), JP (Japan)
 INTEGURAN KK [000000] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 08-219520 [JP 96219520]
 FILED: August 21, 1996 (19960821)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 26.2 (TRANSPORTATION -- Motor Vehicles); 35.5 (NEW ENERGY SOURCES -- Hydrogen); 36.1 (LABOR SAVING DEVICES -- Industrial Robots); 43.3 (ELECTRIC POWER -- Transmission & Distribution)
 JAPIO KEYWORD: R097 (ELECTRONIC MATERIALS -- Metal Oxide Semiconductors, MOS)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a charge protector and a charger wherein a plurality of *series***-connected *batteries*** are uniformly charged with stability and service life is *lengthened*** despite repeated charging and discharging.

SOLUTION: A high-gain amplifier 14 directly compares the *voltage*** across the terminals on a battery with a reference *voltage*** equivalent to the full charging *voltage*** of the said battery determined in a constant-*voltage*** circuit 13. When the charging *voltage*** of the battery reaches the full charging *voltage***, a semiconductor switch circuit 11 placed in *parallel*** with the *battery*** is switch-driven. At the same time the semiconductor switch circuit 11 is constant-current-driven by negative-feedback control. Thereby, charging current supplied to the battery is forcefully bypassed, and thus the battery is prevented from being overcharged with its charging *voltage*** made constant.

58/7,DE/27 (Item 15 from file: 347)
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05645126
 EXPLOSIONPROOF SECONDARY *BATTERY***

PUB. NO.: 09-259926 [JP 9259926 A]
 PUBLISHED: October 03, 1997 (19971003)
 INVENTOR(s): WATANABE SHOICHIRO
 OKOCHI MASAYA

MURAOKA NORIKI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 08-062355 [JP 9662355]
 FILED: March 19, 1996 (19960319)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other)

ABSTRACT

PROBLEM TO BE SOLVED: To prevent generation of abnormal heat by electrically short-circuiting by a mechanical pressure toward inside a bettery, by arranging a collector exposed of polarity different from polarity of a *battery*** case in the outermost periphery of a plate group comprising a positive/negative electrode and a separator.

SOLUTION: A generating element comprising a plate group 4, obtained by winding by a *plurality*** of *turns*** positive/negative plates 5, 6 by interposing a separator 7, and an electrolyte is stored in a *battery*** case 1, the positive plate 5 and a seal plate 2 are connected by a positive electrode lead 5a, the negative plate 6 and the bettery case 1 are connected by a negative electrode lead 6a. In the explosion proof *cylindrical*** *battery***, in the outermost periphery of the electrode group 4, the positive plate 5 of polarity different from the *battery*** case 1 as the negative electrode is arranged, in a collector thereof, an exposure part not given an active material is provided. In this way, in the case of applying a mechanical pressure to the *battery*** toward its inside, the collector and the *battery*** case are brought into contact, a structure is electrically short-circuited, an explosionproof secondary *battery*** of this structure is obtained.

58/7,DE/28 (Item 16 from file: 347)
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05599473

MULTILAYERED HIGH FREQUENCY LOW PASS FILTER

PUB. NO.: 09-214273 [JP 9214273 A]
 PUBLISHED: August 15, 1997 (19970815)
 INVENTOR(s): TAKEDA TSUYOSHI
 TANAKA YOICHI
 NAKAMURA HIDEYUKI
 APPLICANT(s): HITACHI METALS LTD [000508] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 08-284197 [JP 96284197]
 FILED: October 25, 1996 (19961025)
 JAPIO CLASS: 44.1 (COMMUNICATION -- Transmission Circuits & Antennae);
 42.1 (ELECTRONICS -- Electronic Components); 44.4
 (COMMUNICATION -- Telephone)

ABSTRACT

PROBLEM TO BE SOLVED: To reduce the insertion loss of a pass band and to prolong the life of a *battery*** by constituting *coil***-like inductors wound through via holes by more than one turn and capacitors facing electrodes in a multilayer and constituting a low pass filter by them.

SOLUTION: The high frequency low pass filter has an equivalent circuit where the first and second inductors L1 and L2 are connected in *series*** and first, second and third capacitors C1, C2 and C3 are connected between the two inductors L1 and L2 and are connected between the respective other

ends and ground, namely, they are π -connected. In the inductors L1 and L2, electrode patterns formed in more than two layers or three layers are connected by the via holes and they are constituted in a *spiral*** form. The capacitors C1, C2 and C3 are made to face a ground electrode. With such constitution, large inductance can be constituted with a small plane area and short line *length*** and the insertion loss becomes small.

58/7,DE/29 (Item 17 from file: 347)
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05329285
 IGNITION DEVICE FOR INTERNAL COMBUSTION ENGINE

PUB. NO.: 08-284785 [JP 8284785 A]
 PUBLISHED: October 29, 1996 (19961029)
 INVENTOR(s): HISAMOTO TAKATOSHI
 APPLICANT(s): HANSHIN ELECTRIC CO LTD [485539] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 07-112619 [JP 95112619]
 FILED: April 14, 1995 (19950414)
 JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal Combustion)
 JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers & Microprocessors)

ABSTRACT

PURPOSE: To provide size reduction without degrading the reliability of an ignition device for a current shut-down type internal combustion engine.

CONSTITUTION: A DC resistance value R_p of the primary winding of an ignition *coil*** 12 is set so that the maximum value I_{Lmax} of a primary current I_L of the ignition *coil*** supplied from the *battery*** of output voltage V_b may not exceed the maximum rated current of a power transistor Q_1 which is turned on and off by an ignition signal S_g if the power transistor Q_1 exceeds ON time t_{ON} scheduled at the time of regular ignition operation and is kept in a continuously energizing condition. The ON time t_{ON} of the ignition signal S_g is then kept such a *length*** as the *voltage*** V_p which an ignition plug 13 requires can be obtained.

58/7,DE/30 (Item 18 from file: 347)
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05192648
 MANUFACTURE OF ELECTRODE MATERIAL FOR NONAQUEOUS ELECTROLYTE *BATTERY*** AND NONAQUEOUS ELECTROLYTE *BATTERY*** USING THE MATERIAL THEREBY OBTAINED

PUB. NO.: 08-148148 [JP 8148148 A]
 PUBLISHED: June 07, 1996 (19960607)
 INVENTOR(s): TANAKA KOICHI
 TAKAHASHI KENICHI
 KIHIRA TORU
 ENDO EIJI
 APPLICANT(s): SONY CORP [000218] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 06-315525 [JP 94315525]

FILED: November 24, 1994 (19941124)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other)

ABSTRACT

PURPOSE: To increase the reversibility of a negative electrode in (de)doping reaction and improve initial charging and discharging efficiency as well as the service life of a *battery*** by alkylating a carbonaceous material having the capability of (de)doping light metal electrochemically.

CONSTITUTION: Alkyl halide is first subjected to Friedel-Craft's reaction with a carbonaceous material capable of doping and de-doping light metal electrochemically, and having a plane gap equal to 3.70 angstroms or above on a lattice plane (002), true density equal to 1.70g/cc or less, and no heat generation peak equal to or above 700 deg.C in the differential thermal analysis in an air flow, thereby alkylating the material. Then, the material is washed and dried to obtain an electrode material for a nonaqueous electrolyte *battery***. A strip type positive electrode 1 and a strip type negative electrode made of the electrode material are *stacked*** on top of each other via a separator 5, and wound in *many*** *turns*** to form a *spiral*** type electrode body. This electrode body is housed in a nickel plated iron *battery*** vessel 6 and a negative electrode terminal 4 is connected to the inner bottom of the vessel 6. Also, a positive electrode terminal 3 is connected to *battery*** sealing plate 7. In addition, the vessel 6 is filled with an nonaqueous electrolyte, thereby providing a secondary *battery***.

58/7,DE/31 (Item 19 from file: 347)
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04885073
 SMALL-SIZED ELECTRIC APPLIANCE

PUB. NO.: 07-177673 [JP 7177673 A]
 PUBLISHED: July 14, 1995 (19950714)
 INVENTOR(s): MURATA JUNZO
 AOI MASAJI
 APPLICANT(s): KYUSHU HITACHI MAXELL LTD [470796] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 06-303134 [JP 94303134]
 FILED: November 11, 1994 (19941111)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 43.2 (ELECTRIC POWER -- Transformation); 46.2 (INSTRUMENTATION -- Testing)
 JAPIO KEYWORD: R116 (ELECTRONIC MATERIALS -- Light Emitting Diodes, LED);
 R131 (INFORMATION PROCESSING -- Microcomputers & Microprocessors)

ABSTRACT

PURPOSE: To realize stabilized fine control of output from an inverter circuit with high response to the variation in the operating mode of an electric appliance while reducing consumption of a secondary *battery*** as much as possible.

CONSTITUTION: The small-sized electric appliance comprises a main power supply 21 including a secondary *battery*** 6 being charged through the output *coil*** 46 of an inverter circuit 15, and an auxiliary power supply 22 equipped with a tertiary *coil*** 47 having number of *turns*** *several*** times as high as that of the output *coil*** 46. A power load,

e.g. a motor, is driven with an output voltage V_m from the main power supply 21 and means for driving the inverter circuit 15 intermittently and controlling the output thereof is driven with an output voltage V_s from the auxiliary power supply 22.

58/7,DE/32 (Item 20 from file: 347)
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04752702
 FORMATION METHOD OF STORAGE *BATTERY*** JAR DEVICE THEREFOR AND JIG
 THEREFOR

PUB. NO.: 07-045302 [JP 7045302 A]
 PUBLISHED: February 14, 1995 (19950214)
 INVENTOR(s): SUZUKI YUTAKA
 NISHIMURA KYUZO
 APPLICANT(s): SHIN KOBE ELECTRIC MACH CO LTD [000120] (A Japanese Company
 or Corporation), JP (Japan)
 APPL. NO.: 05-188501 [JP 93188501]
 FILED: July 29, 1993 (19930729)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 13.1 (INORGANIC CHEMISTRY --
 Processing Operations)

ABSTRACT

PURPOSE: To increase cooling efficiency during formation and dispense with work of adjusting electrolyte specific gravity.

CONSTITUTION: A *battery*** jar forming jig 2 having electrolyte injection paths IP1-IP6 for injecting *electrolyte*** into *cells*** C1-C6 and electrolyte suction paths SP1-SP6 for drawing out *electrolyte*** from *cells*** C1-C6 is attached to the opening of a *battery*** jar body 1. Thus, the electrolyte injection paths IP1-IP6 and the electrolyte suction paths SP1-SP6 are so disposed that electrolyte drawn out from a cell is injected into an adjoining *cell***, thereby flowing *electrolyte*** in *turns*** through *plural*** *cells***. At first, *electrolyte*** is circulated between a formation electrolyte storage tank T1 and each cell of the *battery*** jar body 1. Then, in the latter half of formation, electrolyte is circulated between a specific gravity adjusting electrolyte storage tank and each cell of the *battery*** jar body 1.

58/7,DE/33 (Item 21 from file: 347)
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04595648
 BATTERY UNIT

PUB. NO.: 06-267548 [JP 6267548 A]
 PUBLISHED: September 22, 1994 (19940922)
 INVENTOR(s): NOMURA MASAAKI
 KIMURA TSUTOMU
 KURIMURA MASAAKI
 FURUSAWA TAKAHIRO
 NAKAIDO SHIGEHIRO
 APPLICANT(s): FUJI PHOTO FILM CO LTD [000520] (A Japanese Company or
 Corporation), JP (Japan)

SANYO ELECTRIC CO LTD [000188] (A Japanese Company or Corporation), JP (Japan)
 SANYO EXCEL KK [000000] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 05-051101 [JP 9351101]
 FILED: March 11, 1993 (19930311)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 29.1 (PRECISION INSTRUMENTS -- Photography & Cinematography); 43.4 (ELECTRIC POWER -- Applications)

ABSTRACT

PURPOSE: To increase the power feeding amount per unit time, and to suppress the housing space of a battery in the space, in one set of a single-phase three-cell battery.

CONSTITUTION: Two sets of batteries 40 and 50 with the rating output *voltage*** 1.5V, the diameter same as a single-phase three-cell battery, and the *length*** H 25 plus or minus 2mm, are connected in *series***, and both *batteries*** are covered with a shrink film 60 contracted by the radiation of the ultraviolet-ray integrally. In this case, it is favorable that both batteries 40 and 50 are connected by inserting the projection of the battery 50 to the recess of the battery 40.

58/7,DE/34 (Item 22 from file: 347)
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04445841
 NONAQUEOUS ELECTROLYTE SECONDARY *BATTERY***

PUB. NO.: 06-089741 [JP 6089741 A]
 PUBLISHED: March 29, 1994 (19940329)
 INVENTOR(s): OZAKI YOSHIYUKI
 EDA NOBUO
 MORITA TERUYOSHI
 APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 04-237969 [JP 92237969]
 FILED: September 07, 1992 (19920907)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other)

ABSTRACT

PURPOSE: To provide a nonaqueous electrolyte secondary *battery*** having high capacity and high energy density enhancing its various characteristics by forming the electrolyte from a mixture solvent and graphite material consisting of spherical particles which can intercalate lithium as the active material.

CONSTITUTION: A positive electrode and a negative electrode are wound a *plural*** of *turns*** into a *coil*** with a separator interposed and accommodated in a *battery*** case 1, wherein a positive electrode lead 5 is drawn out of the positive electrode and connected with a sealing plate 2 while a negative electrode lead 6 is drawn out of the negative electrode and connected with the bottom of the case 1. A graphite material is used consisting of spherical particles capable of intercalating the lithium as the active material in a negative electrode, being composed of a single phase anisotropic optically, and whose plane spacing (d002) of the 002 plane according to the X-ray wide angle diffraction method lies between 3.36 angstroms and 3.40 angstroms. The solvent for electrolyte is of hybrid type which includes ethylene carbonate, diethyl carbonate, and

aliphatic ester carbonate. This achieves a high capacity and high energy density and enhances various characteristics such as low temperature characteristic.

58/7,DE/35 (Item 23 from file: 347)
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04389961
IGNITOR FOR ENGINE

PUB. NO.: 06-033861 [JP 6033861 A]
PUBLISHED: February 08, 1994 (19940208)
INVENTOR(s): NAITO MASAHIRO
NAKANE HISANORI
SHIOMI KAZUHIRO
APPLICANT(s): MAZDA MOTOR CORP [000313] (A Japanese Company or Corporation)
, JP (Japan)
APPL. NO.: 04-183913 [JP 92183913]
FILED: July 10, 1992 (19920710)
JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal
Combustion)

ABSTRACT

PURPOSE: To maintain the excellent ignition state at low or high temperature state and prevent the change of the ignition state due to the progress of the exhaustion of an electrode.

CONSTITUTION: A series gap 17 is arranged in series with the electric discharge gap of a spark plug 2 between the electrode of the spark plug 2 and an ignition *coil*** 5. A varying means 18 for the gap length G of the series gap is installed, and an operation controller 20 which operates the gap length varying means in the direction for reducing the gap *length*** when the *battery*** *voltage*** is less than a set low voltage value and the spark plug temperature is lower than a set high temperature, is installed. Further, the gap length varying means is operated so that the gap length is kept constant according to the integration traveling distance by an operation control means.

58/7,DE/36 (Item 24 from file: 347)
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04323277
NONAQUEOUS ELECTROLYTIC SECONDARY *BATTERY***

PUB. NO.: 05-314977 [JP 5314977 A]
PUBLISHED: November 26, 1993 (19931126)
INVENTOR(s): KOBAYASHI SHIGEO
HARAGUCHI KAZUNORI
MORIGAKI KENICHI
NITTA YOSHIAKI
TERAOKA TAKAHIRO
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company
or Corporation), JP (Japan)
APPL. NO.: 04-117226 [JP 92117226]
FILED: May 11, 1992 (19920511)

JAPIO CLASS: 42.9 (ELECTRONICS -- Other)

ABSTRACT

PURPOSE: To increase capacity and improve cycle characteristics by using a carbon material with a Fullerene crystal structure of nodular molecules as a negative electrode.

CONSTITUTION: An electrode plate group 4 in a case 1 comprises positive and negative electrodes *spirally*** wound by a *plurality*** of *turns*** via a separator. A carbon material of a Fullerene crystal structure of nodular molecules constituted of a hexagon having six carbon atoms and a pentagon having five carbon atoms, is used as a negative electrode. Consequently, a lithium amount intercalated and de-intercalated with carbon increases. Also, as the carbon has a nodular crystal structure, the negative electrode becomes strong, compared with the case of a laminar structure, and a *battery*** having large capacity and excellent cycle characteristics can be provided. Also, the nodular molecules are constituted of 60, 70, 76 and 84 carbon atoms.

58/7,DE/37 (Item 25 from file: 347)

DIALOG(R) File 347:JAPIO

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04269028

SWITCHING REGULATOR

PUB. NO.: 05-260728 [JP 5260728 A]

PUBLISHED: October 08, 1993 (19931008)

INVENTOR(s): ISHIBASHI YOSHIHIRO

APPLICANT(s): SHARP CORP [000504] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 04-087903 [JP 9287903]

FILED: March 11, 1992 (19920311)

JAPIO CLASS: 43.2 (ELECTRIC POWER -- Transformation); 42.2 (ELECTRONICS -- Solid State Components); 42.5 (ELECTRONICS -- Equipment); 43.3 (ELECTRIC POWER -- Transmission & Distribution); 44.6 (COMMUNICATION -- Television); 45.9 (INFORMATION PROCESSING -- Other)

JAPIO KEYWORD: R011 (LIQUID CRYSTALS); R101 (APPLIED ELECTRONICS -- Video Tape Recorders, VTR)

ABSTRACT

PURPOSE: To reduce voltage loss in a circuit, to obtain desired load *voltage*** and to *lengthen*** the operating time of a *battery*** even when the voltage of the *battery*** is lowered.

CONSTITUTION: A switch circuit 12 is connected in parallel with the series connection *coil*** L₁ of an LC filter constituting an input stage and a switch circuit 13 with the series connection *coil*** L₂ of an LC filter organizing an output stage. Both switch circuits 12, 13 are controlled by a control signal from a system controller 20, and turned ON when the duty ratio of the PWM pulses of a comparator 4 or an output transistor Tr₁ or a switching transistor Tr₂ reaches 100% and the *coils*** L₁, L₂ are short-circuited. Accordingly, voltage loss in the *coils*** L₁, L₂ is prevented, and desired output voltage is acquired even at low input voltage.

58/7,DE/38 (Item 26 from file: 347)

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03969658
 ENGINE STARTING SYSTEM

PUB. NO.: 04-334758 [JP 4334758 A]
 PUBLISHED: November 20, 1992 (19921120)
 INVENTOR(s): MORI HIDEO
 SHIZUKA MASAYUKI
 APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP
 (Japan)
 APPL. NO.: 03-104116 [JP 91104116]
 FILED: May 09, 1991 (19910509)
 JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal
 Combustion)

ABSTRACT

PURPOSE: To improve reliability of a switch part by most favorably suitably restraining output of an electric motor and lightening mechanism elements.

CONSTITUTION: A first semiconductor switch 5 is provided between an electric motor 1 and a *battery*** 6 in *series***, and it is controlled by a control device 10 in accordance with output of a state sensor 9 of an automobile so that output of the electric motor is to be minimum. It comes to be possible to extensively lighten mechanism elements, improve reliability, *lengthen*** a life span and improve reliability of joint parts. Additionally, it comes to be possible to correspond with a high-*voltage*** system.

58/7,DE/39 (Item 27 from file: 347)
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03598434
 SWITCHER FOR MEMORY BACKUP BATTERY

PUB. NO.: 03-261334 [JP 3261334 A]
 PUBLISHED: November 21, 1991 (19911121)
 INVENTOR(s): SHIMOI HIROYUKI
 APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP
 (Japan)
 APPL. NO.: 02-058058 [JP 9058058]
 FILED: March 12, 1990 (19900312)
 JAPIO CLASS: 43.3 (ELECTRIC POWER -- Transmission & Distribution); 42.9
 (ELECTRONICS -- Other); 45.2 (INFORMATION PROCESSING --
 Memory Units)

ABSTRACT

PURPOSE: To prevent outflow of current and to *lengthen*** backup time of memory through a battery by providing means for preventing flow-in of *battery*** current in *series*** with a pull-up resistor.

CONSTITUTION: When power is not fed, output at pin 3 of a *voltage*** monitor 10 is 'Low' and a transistor Tr 3 is turned OFF, no power is fed from a power supply to a memory 8 which is fed power from a battery 9. Even if pin 3 of the *voltage*** monitor 10 has 'High' output and a logic signal is inputted to an AND gate 17-1, the signal is not inputted as a chip

select signal to the memory 8. At that time, source *voltage*** is 0V and a *voltage*** is applied in reverse direction from the battery 9 onto a diode D3. Consequently no current flow and power is not drained uselessly from the battery 9 but the power is entirely used in the memory 8, resulting in *lengthening*** of memory 8 backup time through the battery 9.

58/7,DE/40 (Item 28 from file: 347)
DIALOG(R)File 347:JAPIO
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03103324
ELECTRIC KOTATSU

PUB. NO.: 02-078824 [JP 2078824 A]
PUBLISHED: March 19, 1990 (19900319)
INVENTOR(s): TAKAHASHI MINORU
 INOUE AKIRA
 KUMAGAI YUKIO
APPLICANT(s): TOSHIBA ELECTRIC APPLIANCE CO LTD [470908] (A Japanese
 Company or Corporation), JP (Japan)
APPL. NO.: 63-231765 [JP 88231765]
FILED: September 16, 1988 (19880916)
JAPIO CLASS: 43.4 (ELECTRIC POWER -- Applications); 30.4 (MISCELLANEOUS
 GOODS -- Furniture)
JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers &
 Microprocessors)

ABSTRACT

PURPOSE: To supply electric power to a remote controller without using a *battery*** by providing *coils*** inductively coupled with the main body of a framed kotatsu (*foot*** -warmer) and with the remote controller, respectively, and by providing a charging element for a power source, which is connected to a second *coil***.

CONSTITUTION: When a power source switch is closed, a microcomputer 9 emits a control signal to a heater controlling circuit 10 and sends an oscillation instruction to an oscillation circuit 11. Upon receipt of this oscillation instruction, the oscillation circuit 11 generates a rectangular wave of several tens kHz. This rectangular wave is amplified by an amplifying circuit 13 and is then supplied to a first induction *coil*** 2. According to this supply, a magnetic field H is produced from the first induction *coil*** 2. Since this magnetic field H intersects with a second *coil*** 4, a voltage of the rectangular wave is induced in the second induction *coil*** 4 by an electromagnetic induction action. This voltage is rectified in full wave by a full-wave rectifying circuit 16 to be supplied to a capacitor 17 with a large capacity. Thus, power is accumulated in the capacitor 17.

58/7,DE/41 (Item 29 from file: 347)
DIALOG(R)File 347:JAPIO
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02802771
CAPACITANCE DISCHARGE IGNITION DEVICE

PUB. NO.: 01-100371 [JP 1100371 A]
PUBLISHED: April 18, 1989 (19890418)

INVENTOR(s): OGAWA SUMITAKA
 APPLICANT(s): HONDA MOTOR CO LTD [000532] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 62-258547 [JP 87258547]
 FILED: October 13, 1987 (19871013)
 JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal Combustion)

ABSTRACT

PURPOSE: To make device in small size and light in weight and suppress the cost by switching a switch circuit interposed in series to a *series*** circuitry of *battery*** and *coil*** after ignition of an spark plug, and charging a capacitor with *voltage*** induced in the *coil***.

CONSTITUTION: Positive electrode of a battery 1 is connected to one end of a charging *coil*** 10 of an AC generator 10 through an ignition switch 8. The other end of charging *coil*** 10a is connected to a diode D(sub 2) of a capacitance discharge ignition circuit 11. Further a transistor Tr(sub 2) as a switching element is connected to the junction a. One end of a capacitor C for charging and discharging is connected to the diode D(sub 2), and the other end is connected with the primary *coil*** 4a of ignition *coil*** 4, while the secondary *coil*** 4b with a spark plug 12. On the other hand, a controlling thyristor SCR is connected to the junction of diode D(sub 2) and capacitor C.

58/7,DE/42 (Item 30 from file: 347)
 DIALOG(R) File 347:JAPIO
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02466934
 MULTIPLIER

PUB. NO.: 63-083834 [JP 63083834 A]
 PUBLISHED: April 14, 1988 (19880414)
 INVENTOR(s): SASAKI TORU
 MEN KAZUYUKI
 APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)
 TOSHIBA MICRO COMPUT ENG CORP [486761] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 61-228490 [JP 86228490]
 FILED: September 29, 1986 (19860929)
 JAPIO CLASS: 45.1 (INFORMATION PROCESSING -- Arithmetic Sequence Units)

ABSTRACT

PURPOSE: To realize multiplication of both codes and non-codes by using a *multiplicand*** correcting *cell*** which *turns*** a *multiplicand*** into a non-code and a *multiplier*** correcting *cell*** which *turns*** a *multiplier*** into a non-code.

CONSTITUTION: The multiplicands X7-X0 are supplied in common to the data input of each of columns S10-S47 of plural selectors arrayed in a matrix form. While the partial multiplier decoded values ydec1-ydec4 which are defined by the booth algorithm are supplied to the control input of each row. Then the *multiplicand*** correcting *cells*** MX1-MX4 are provided to the digits higher than the most significant digits of plural selectors of each row that has input of a multiplicand to turn the multiplicands into non-codes with correction. While the *multiplier*** correcting *cells*** MY0-MY7 are provided among optional rows of the matrix to turn the

multipliers into non-codes. Then the partial product delivered from a selector of each row is added with the output value given from each correcting cell. In such a way, the multiplication is attained with both codes and non-codes by means of a comparatively small quantity of hardware with no extreme increase of the arithmetic time nor structural size.

58/7,DE/43 (Item 31 from file: 347)
 DIALOG(R)File 347:JAPIO
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02222372

*FUEL*** *CELL***

PUB. NO.: 62-139272 [JP 62139272 A]
 PUBLISHED: June 22, 1987 (19870622)
 INVENTOR(s): YONEZAWA SHIGEKI
 MIZUNO YUTAKA
 SUZUKI YASUO
 APPLICANT(s): YAMAHA MOTOR CO LTD [001007] (A Japanese Company or
 Corporation), JP (Japan)
 APPL. NO.: 60-276907 [JP 85276907]
 FILED: December 11, 1985 (19851211)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 35.0 (NEW ENERGY SOURCES --
 General)

ABSTRACT

PURPOSE: To make drainage of water produced in a cell good and increase power generating efficiency by turning the surface of a cell vertically, and also turning guide grooves of a cathode plate vertically.

CONSTITUTION: In a *fuel*** *cell*** main body 31, a cell 33 in which a plate-like electrolyte matrix 1 impregnated with electrolyte such as phosphoric acid is placed between an anode plate 2 and a cathode plate 3 is incorporated. A cooling pipe 4 in which cooling water or other coolant is circulated if necessary is arranged on the cathode plate 3 side. The cell 33 is arranged so that its surface *turns*** vertically. A *plurality*** of *cells*** are stacked with a separator 5 interposed every cell.

58/7,DE/44 (Item 32 from file: 347)
 DIALOG(R)File 347:JAPIO
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02065650

ENGINE WARM-UP DEVICE

PUB. NO.: 61-279750 [JP 61279750 A]
 PUBLISHED: December 10, 1986 (19861210)
 INVENTOR(s): KITADA SHINICHIRO
 SHINSHI MAMORU
 APPLICANT(s): NISSAN MOTOR CO LTD [000399] (A Japanese Company or
 Corporation), JP (Japan)
 APPL. NO.: 60-123123 [JP 85123123]
 FILED: June 06, 1985 (19850606)
 JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal
 Combustion)
 JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers &
 Microprocessors)

ABSTRACT

PURPOSE: To aim at shortening the warm-up time of an engine and at reducing noise during engine warm-up, by controlling the electrical load of an engine driven generator so that the rotational speed of the engine becomes a predetermined value which is determined in accordance with the temperature of the engine.

CONSTITUTION: An engine driven generator 1 has a field *coil*** 10 which is fed with field current through a field control circuit 11, and an armature *coil*** 12 including *three***-phase *windings***, and the *three***-phase electromotive force is rectified through a three-phase diode bridge circuit 13, and is then charged in an on-board *battery*** 2. The voltage of the *battery*** 2 is fed to an electrical load 4 through a key switch 3. Current passing through the load 4 is turned on and off by a transistor 5 which is energized by an H-level signal from a comparator 6 when a detected rotational speed voltage delivered from a rotational speed detector 8 is higher than a reference rotational speed voltage that is delivered from a temperature/rotational speed converter 7 in accordance with the output of a water temperature detector 9.

58/7,DE/45 (Item 33 from file: 347)
 DIALOG(R)File 347:JAPIO
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01980268
 AMMETER CIRCUIT FOR CAR

PUB. NO.: 61-194368 [JP 61194368 A]
 PUBLISHED: August 28, 1986 (19860828)
 INVENTOR(s): AIBA MORIO
 MACHIDA KOICHI
 APPLICANT(s): HINO MOTORS LTD [323781] (A Japanese Company or Corporation),
 JP (Japan)
 APPL. NO.: 60-034194 [JP 8534194]
 FILED: February 22, 1985 (19850222)
 JAPIO CLASS: 46.1 (INSTRUMENTATION -- Measurement); 26.2 (TRANSPORTATION
 -- Motor Vehicles)

ABSTRACT

PURPOSE: To make it possible to prevent the rising in temperature even if the *battery*** capacity of a car increases, by connecting the voltage terminal of the current dividers inserted between a plurality of alternators and a *battery*** to a *plurality*** of *windings*** of an ammeter.

CONSTITUTION: The direction of the DC current traversing a current divider $Sh_{(sub 2)}$ is determined by the difference between the output of an alternator $G_{(sub 2)}$ and the magnitude of the sum of the inputs of loads $L_{(sub 21)}-L_{(sub 23)}$ connected to said alternator $G_{(sub 2)}$ and the discharge current or charge current of a *battery*** $B_{(sub 2)}$ is flowed to the current divider $Sh_{(sub 2)}$. A discharge current or charge current is also flowed to a current divider $Sh_{(sub 3)}$ in the same way by the difference between the output of an alternator $G_{(sub 3)}$ and the sum of the inputs of loads $L_{(sub 31)}-L_{(sub 33)}$. These two divided currents flow to the *coils*** $C_{(sub 1)}$, $C_{(sub 2)}$ of an ammeter $A_{(sub 2)}$ and the discharge or charge current quantity of the *battery*** $B_{(sub 2)}$ is displayed by an indicator N . By this mechanism, a current divider for a large current becomes unnecessary and, therefore, the rising in temperature can be prevented.

58/7,DE/46 (Item 34 from file: 347)
DIALOG(R)File 347:JAPIO
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01574276

*VOLTAGE*** MONITOR CIRCUIT

PUB. NO.: 60-052776 [JP 60052776 A]
PUBLISHED: March 26, 1985 (19850326)
INVENTOR(s): ARAKAWA MASAO
SAKAMOTO SHINJI
SHINMIYO YOSHIHIKO
APPLICANT(s): MATSUSHITA ELECTRIC WORKS LTD [000583] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 58-160814 [JP 83160814]
FILED: August 31, 1983 (19830831)
JAPIO CLASS: 46.1 (INSTRUMENTATION -- Measurement); 43.4 (ELECTRIC POWER -- Applications)
JAPIO KEYWORD: R116 (ELECTRONIC MATERIALS -- Light Emitting Diodes, LED)

ABSTRACT

PURPOSE: To obtain a *voltage*** monitor circuit which can respond to a change of the number of cells, by providing a sensor which senses the number of cells and setting a reference *voltage*** or a detecting *voltage*** in accordance with the change of the number of cells.

CONSTITUTION: A resistance R2 constitutes a variable resistance which receives a signal of the number of cells from a sensor part B to change the resistance value. This sensor part B consists of light emitting elements 5, photodetectors 6, and a signal processing part 7 and detects the *length*** of storage batteries BT. Light emitting elements 5 are connected in series, and photodetectors 6 are connected in series in accordance with individual elements 5. The required number of storage batteries BT are arranged in series between light emitting elements 5 and photodetectors 6. The light from light emitting elements 5 in positions where storage batteries BT exist is intercepted, but the light from light emitting elements 5 in positions where storage batteries BT do not exist reaches photodetectors 6. The photodetectors 6 and storage *batteries*** arranged in *series*** are allowed to correspond to each other to detect the *length*** of storage batteries BT. Since the resistance value of the resistance R2 is larger when larger the number of cells and is smaller when smaller the number of cells, the detecting *voltage*** is changed automatically in accordance with the number of cells.

58/7,DE/47 (Item 35 from file: 347)
DIALOG(R)File 347:JAPIO
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01256850

FLAT TYPE *BATTERY***

PUB. NO.: 58-194250 [JP 58194250 A]
PUBLISHED: November 12, 1983 (19831112)
INVENTOR(s): NAKAMURA YOSHIYUKI
KITAMURA MUNEO
APPLICANT(s): KAWAGUCHIKO SEIMITSU KK [365637] (A Japanese Company or

APPL. NO.: Corporation), JP (Japan)
 57-076946 [JP 8276946]
 FILED: May 07, 1982 (19820507)
 JAPIO CLASS: 42.9 (ELECTRONICS -- Other); 29.1 (PRECISION INSTRUMENTS -- Photography & Cinematography); 29.3 (PRECISION INSTRUMENTS -- Horologe); 29.4 (PRECISION INSTRUMENTS -- Business Machines)

ABSTRACT

PURPOSE: To stabilize the opened circuit *voltage*** and total *length*** dimensions in a flat type *battery*** provided with an insulating coat at a section where a negative electrode can touches a positive electrode can and improve its leakageproofness by providing an air escape section a the *cylindrically*** rising section of the negative electrode can.

CONSTITUTION: A negative electrode can 7 is made of a cap-shaped metal material and consists of a closed-bottom section 7a, *cylindrical*** rising section 7b, stepped section 7c provided at the rising section 7b, and notched groove 7d provided on the upper surface. The surface of the rising section 7b is coated with an insulating coating 7e. A positive electrode can 8 is also made of a cup-shaped metal material and consists of a closed-bottom section 8a and a *cylindrical*** section 8b. The *cylindrical*** section 8b is shrinkage fit or pressed in on the external surface of the rising section 7b and is fit water-tightly through the coating 7e. Negative and positive electrode active materials 9 and 10 are divided by a separator 11. When the heated positive electrode can 8 is made to adhere tightly to the negative electrode can 7, the air is allowed to escape outside through the groove 7d by the expansion of contents and floating of the positive electrode can 8 is prevented. As a result, the opened circuit *voltage*** and total *length*** dimensions can be stabilized and the leakageproofness can be improved.

58/7,DE/48 (Item 36 from file: 347)
 DIALOG(R)File 347:JAPIO
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01205771
 INTERNAL-COMBUSTION ENGINE IGNITER

PUB. NO.: 58-143171 [JP 58143171 A]
 PUBLISHED: August 25, 1983 (19830825)
 INVENTOR(s): TAKAMI SATORU
 APPLICANT(s): AUTOMOB ANTI POLLUT & SAF RES CENTER [418510] (A Japanese Company or Corporation), JP (Japan)
 APPL. NO.: 57-022831 [JP 8222831]
 FILED: February 17, 1982 (19820217)
 JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal Combustion)

ABSTRACT

PURPOSE: To make the building-up of *voltage*** steep and to *lengthen*** the duration of discharge by performing both current interruption and capacity discharge by means of the same primary winding, while connecting a choking *coil*** in series to the primary winding of an ignition *coil***.

CONSTITUTION: When an interrupter 11 is opened, an interrupting transistor 15 is turned OFF, allowing the primary current of an ignition *coil*** 17 to be interrupted. A thyristor 4 is turned ON, and the charge in an energy storing condenser 3 flows through the primary winding 17a of the ignition

*coil*** 17. The phases of the both voltages are synthesized in the same phase, so that a superposed voltage is yielded in the secondary winding 17b of the ignition *coil*** 17. A choking *coil*** 18 serves to prevent an energy storing condenser from being short-circuited by a power supply *battery*** 1 when the charge of said condenser is discharged and to most preferably synthesize the voltages produced by current interruption and capacity discharge respectively.

58/7,DE/49 (Item 37 from file: 347)

DIALOG(R) File 347:JAPIO

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01095629

*BATTERY*** TYPE IGNITION HEATER

PUB. NO.: 58-033029 [JP 58033029 A]

PUBLISHED: February 26, 1983 (19830226)

INVENTOR(s): KAJITA TAKEKICHI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 56-131113 [JP 81131113]

FILED: August 20, 1981 (19810820)

JAPIO CLASS: 30.4 (MISCELLANEOUS GOODS -- Furniture); 24.2 (CHEMICAL ENGINEERING -- Heating & Cooling)

ABSTRACT

PURPOSE: To form an ignition heater by supplying a current to a *coil*** consisting of a binary element alloy of cobalt and nickel having a catalytic activity for oxidation of propane.

CONSTITUTION: A binary element alloy 1 of cobalt and nickel in the composition range of 37-60% of cobalt and 63-40% of nickel, having an oxidation catalytic activity by which propane oxidation ratio becomes 60% or more at a temperature of 600c, is constituted in a line or sheet shape. A *battery*** type ignition heater is constructed by working the above alloy into the shape of a *coil*** or a corrugated sheet. The material thus worked into the shape of the *coil*** or corrugated sheet is cut in a required *length***. A *voltage*** of 2-3V is applied to both ends of the material by a *battery*** and the wire is red-heated. By drawing the red-hot heater near to the burning wick, ignition is performed.

58/7,DE/50 (Item 38 from file: 347)

DIALOG(R) File 347:JAPIO

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01065072

FIRING SYSTEM FOR INTERNAL-COMBUSTION ENGINE

PUB. NO.: 58-002472 [JP 58002472 A]

PUBLISHED: January 08, 1983 (19830108)

INVENTOR(s): IWASAKI SHINICHIRO

APPLICANT(s): AISIN SEIKI CO LTD [000001] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 57-094639 [JP 8294639]

FILED: June 01, 1982 (19820601)

PRIORITY: 6-268,889 [US 268889-1981], US (United States of America), June 01, 1981 (19810601)

JAPIO CLASS: 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal Combustion)

JAPIO KEYWORD: R116 (ELECTRONIC MATERIALS -- Light Emitting Diodes, LED); R124 (CHEMISTRY -- Epoxy Resins)

ABSTRACT

PURPOSE: To eliminate the high *voltage*** wiring and to *lengthen*** the continuous firing time, by providing an independent high voltage generating system while arranging each firing transformer in each firing plug cover.

CONSTITUTION: The firing signal for each *cylinder*** produced from four photo-interruptors 4a, 4b... in a crank shaft position sensor will bring the emitter signal a_(sub 1)(b_(sub 1)...) into high level to turn off the transistors Q1a, Q2a simultaneously and to produce the *battery*** voltage Vcc onto the collector. Said voltage Vcc will produce the continuous intermittent spark between the conductors SP1a and SP1b of the firing plug SP1 through the firing transformer T1. Here the firing transformer T1 is held coaxially with a *tubular*** member around the firing plug SP1 by means of the assembling device requiring no wiring between them.

58/7,DE/51 (Item 39 from file: 347)

DIALOG(R) File 347:JAPIO

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00629849

STRUCTURE OF STATOR OF MAGNETIC GENERATOR

PUB. NO.: 55-117449 [JP 55117449 A]

PUBLISHED: September 09, 1980 (19800909)

INVENTOR(s): KIKUCHI MASAO

APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 54-024458 [JP 7924458]

FILED: March 05, 1979 (19790305)

JAPIO CLASS: 43.1 (ELECTRIC POWER -- Generation); 21.2 (ENGINES & TURBINES, PRIME MOVERS -- Internal Combustion); 26.2 (TRANSPORTATION -- Motor Vehicles)

ABSTRACT

PURPOSE: To tightly fix the generating *coils*** to a stator core, and to make the assembly work easy by providing extruded portions on the inner surface of an inserting hole into which the magnetic pole of a bobbin is inserted, and plastically deform the extruded portion at the outer surface of the magnetic pole when the magnetic pole is inserted into said hole.

CONSTITUTION: A plurality of radially-extruding *battery***-charging *coils*** 2 and two igniting-capacitor-charging *coils*** 3 are provided on the outer surface of a circular-stator core 1 which is formed by laminating thin iron plates. The *coil*** 2 is constituted by a magnetic pole 21 which extrudes from the outer surface of the stator core 1 and a winding 22 which is wound around 1 *plurality*** of *turns*** around said pole. A bobbin 32 is of a *tubular*** shape in which a magnetic-pole inserting hole 32a is provided. Flanges 32b are provided at both ends thereof, and a plurality of extruded portions 32c are formed along the axis of the inserting hole on the inner surface of the magnetic-pole inserting hole 32a. When the magnetic pole 31 is inserted into the inserting hole 32a, each extruded portion 31c on the inner surface of the inserting hole is subjected to compressive stress by the magnetic pole 31, and plastic deformation is yielded at the tip portion and elastic deformation is

yielded at the bare.

58/7,DE/52 (Item 1 from file: 350)
 DIALOG(R) File 350:Derwent WPIX
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016483835

WPI Acc No: 2004-641778/200462

Automated reporter device has reservoirs containing recognition molecule coated magnetic beads and sample solution, electromagnet winding, power supply unit for supplying current to winding to agglomerate beads into porous mass

Patent Assignee: SULLIVAN B M (SULL-I); ZSOLNAY D L (ZSOL-I)

Inventor: SULLIVAN B M; ZSOLNAY D L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040166547	A1	20040826	US 2003374270	A	20030225	200462 B

Priority Applications (No Type Date): US 2003374270 A 20030225

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20040166547	A1	13	G01N-033/53	

Abstract (Basic): US 20040166547 A1

Abstract (Basic):

NOVELTY - Automated reporter device having first reservoir containing recognition molecule coated magnetic beads, second reservoir having sample solution, a containing region, electromagnet winding, first unit for introducing coated beads into containing region, power supply unit for supplying current to electromagnet winding to agglomerate coated beads into a porous mass, and second unit for introducing sample solution onto porous mass, is new.

DETAILED DESCRIPTION - Automated computer controlled reporter device (I) for conducting immunoassay and molecular biology procedures, has:

- (a) first reservoir containing recognition molecule coated magnetic beads (3);
- (b) second reservoir containing sample solution;
- (c) containing region having walls of non-magnetic material, upper end containing entrance and axis extending through upper end;
- (d) electromagnet winding for producing magnetic field along axis of containing region when winding is energized with electric current;
- (e) winding containing *multiple*** *turns*** wound about walls and axis of containing region;
- (f) first unit for introducing coated magnetic beads from first reservoir into containing region through entrance;
- (g) power supply unit for supplying current to electromagnet winding following introduction of coated magnetic beads within containing region to agglomerate coated magnetic beads into porous mass; and
- (h) second unit for introducing sample solution through entrance and onto porous mass when electromagnet winding is being supplied with current, where sample solution passes through porous mass.

INDEPENDENT CLAIMS are included for the following:

- (1) emulate (M1) mixing sample solution with primary recognition molecule coated magnetic beads, comprising:

- (a) inserting primary recognition molecule coated magnetic beads

into non-magnetic confinement region;

(b) generating magnetic field coaxial with axis of non-magnetic confinement region to agglomerate primary recognition molecule coated magnetic beads into porous mass;

(c) directing sample solution through porous mass for permitting portions of sample solution to stick to respective primary recognition molecule coated magnetic beads to form primary antibody (Ab)/sample complex on beads; and

(d) withdrawing magnetic field to de-agglomerate primary recognition molecule coated magnetic beads;

(2) linking (M2) molecules of sample of bioagent, protein or nucleic acid to coated magnetic beads, coated magnetic beads being individually coated with recognition molecule for molecules of respective bioagent, protein or nucleic acid of sample, comprising:

(a) depositing molecules of sample within liquid to form sample solution, liquid being non-reactive to molecules of sample and to coated magnetic beads;

(b) depositing coated magnetic beads in liquid to form magnetic bead solution, liquid being non-reactive to molecules of sample and to coated magnetic beads;

(c) temporarily agglomerating coated magnetic beads to form porous mass of coated magnetic beads suspended in liquid; and

(d) flowing sample solution into porous mass of coated magnetic beads; and

(3) apparatus (II) for conducting electrochemical enzyme linked immunosorbent assay (ELISA) for biogent, protein or nucleic acid, has:

(a) several reservoirs (9,13,19,23) including a first reservoir for holding recognition molecule coated magnetic beads in liquid, recognition molecule having capability of recognizing and linking to respective bioagent, protein or nucleic acid, second reservoir for holding wash solution, third reservoir for holding recognition molecule linked enzyme, recognition molecule of recognition linked enzyme having capability of recognizing and linking to respective bioagent, protein or nucleic acid, fourth reservoir for holding sample solution containing respective bioagent, protein or nucleic agent, and fifth reservoir for holding substrate reporter, reaction chamber, examination cell, electromagnet winding for producing magnetic field along axis of reaction chamber when winding is energized, winding including *multiple*** *turns*** formed in *helix*** about axis of reaction chamber;

(b) electronic controller including program;

(c) program including ELISA program and analysis program, start switch, and display, sensor for electrically detecting level of reporter present in examination cell and supplying detected level of reporter to electronic controller;

(d) first valve controlled by controller for introducing recognition molecule coated magnetic beads in liquid form first reservoir into reaction chamber when required by ELISA program, power supply units controlled by controller for supplying current to electromagnet winding when required by ELISA program following introduction of recognition molecule coated magnetic beads into reaction chamber, where winding is energized to agglomerate recognition molecule coated magnetic beads into porous mass; and

(e) second valve controlled by controller for introducing sample solution from fourth reservoir onto porous mass when required by ELISA program during period when electromagnet winding is being supplied with current to flow sample solution through porous mass, where electronic controller when selectively required by ELISA program further motivates passage of respective contents of each of second and third reservoirs

into reaction chamber, passage of contents of reaction chamber into examination cell, passage of contents of fifth reservoir into examination cell and removal of contents of examination cell in whole and/or in part, where passage of contents of fifth reservoir into examination cell when respective bioagent, protein or nucleic acid is present in examination *cell*** produces *electrochemical*** reaction inside examination cell to produce levels of reporter that increases over time, where sensor detects levels of reporter and reports those levels to controller, and where analysis program analyzes detected level of reporter at each of several of time intervals reporter to controller, determines concentration of respective bioagent, protein or nucleic acid present in sample and initiates display of concentration on display.

USE - (I) is useful for conducting immunoassay and molecular biology procedures. (II) is useful for conducting an electrochemical enzyme linked immunosorbent assay (ELISA) for a biogent, protein or nucleic acid (both claimed).

ADVANTAGE - (I) is automated and computer controlled apparatus (claimed). (I) improves the speed and sensitivity of (II).

DESCRIPTION OF DRAWING(S) - The drawing shows a mixer apparatus in which the sample of suspect bioagent is mixed with, intermingled with or bathes the antibody coated magnetic beads.

Length of pipette or glass tube (1)
 Coated magnetic beads (3)
 Electric *coil*** (5)
 Electric pump (7)
 Reservoir (9,13,19,23)
 Electric valve (10,14,20,21)
 Conduit (11,15,21,25)
 Wash solution (22)
 secondary antibody enzyme solution (26Lead (27).
 pp; 13 DwgNo 1/3

Title Terms: AUTOMATIC; REPORT; DEVICE; RESERVOIR; CONTAIN; RECOGNISE; MOLECULAR; COATING; MAGNETIC; BEAD; SAMPLE; SOLUTION; ELECTROMAGNET; WIND ; POWER; SUPPLY; UNIT; SUPPLY; CURRENT; WIND; AGGLOMERATE; BEAD; POROUS; MASS

Derwent Class: B04; D16; S03; T01

International Patent Class (Main): G01N-033/53

International Patent Class (Additional): G01N-033/48; G01N-033/50; G01N-033/537; G01N-033/543; G06F-019/00

58/7,DE/53 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016232149

WPI Acc No: 2004-390038/200436

Rechargeable electrochemical cell useful for determining a charge termination point comprises outer can containing an internal cavity, electrodes disposed in the cavity and a switch assembly comprising a flexible member

Patent Assignee: RAYOVAC CORP (RAYV); BUSHONG W C (BUSH-I); CHEESEMAN P (CHEE-I); DAVIDSON G (DAVI-I); KAUFMAN T (KAUF-I); MANK R (MANK-I); ROOT M (ROOT-I); ROSITCH A (ROSI-I); VU V H (VUVH-I)

Inventor: BUSHONG W C; CHEESEMAN P; DAVIDSON G; KAUFMAN T; MANK R; ROOT M; ROSITCH A; VU V H

Number of Countries: 100 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicant No	Kind	Date	Week
WO 200438831	A2	20040506	WO 2003US34363	A	20031027	200436 B
US 20040145344	A1	20040729	US 200145934	A	20011019	200450
			US 2002421624	P	20021025	
			US 2003697221	A	20031027	
AU 2003286771	A1	20040513	AU 2003286771	A	20031027	200468

Priority Applications (No Type Date): US 2002421624 P 20021025; US 200145934 A 20011019; US 2003697221 A 20031027

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200438831	A2	E	80	H01M-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

US 20040145344 A1	H02J-007/00	CIP of application US 200145934
		Provisional application US 2002421624
AU 2003286771 A1	H01M-000/00	Based on patent WO 200438831

Abstract (Basic): WO 200438831 A2

Abstract (Basic):

NOVELTY - A rechargeable electrochemical cell having a positive and negative terminal comprises an outer can containing an internal cavity, a positive and negative electrode disposed in the internal cavity and a switch assembly containing a flexible member and two conductive elements.

DETAILED DESCRIPTION - A rechargeable electrochemical cell containing a positive and negative terminal comprises an outer can containing an internal cavity, a positive and negative electrode disposed in the internal cavity and a switch assembly. The switch assembly comprises a flexible member, a first conductive element in electrical communication with the positive electrode and a second conductive element. The flexible member comprises a material having a heat deflection temperature greater than 100degreesC at 264 PSI and a tensile strength greater than 75 Mpa. The member flexes from a first position towards a second position in response to internal cell pressure. The second conductive element is in electrical communication with the positive electrode, in removable electrical communication with the first conductive element and in mechanical communication with the flexible member. The first and second conductive elements are removed from electrical communication when the flexible member flexes towards the second position in response to an internal pressure exceeding a predetermined threshold.

INDEPENDENT CLAIMS are included for following:

(a) a battery pack containing several electrochemical cells;
 (b) method (M1) for charging the electrochemical cell involving:
 (ia) providing a charge of a *voltage*** level of 1.2 - 2 V and a current level of 4 - 15 A; and iia) flexing the flexible member towards the second position to remove the first and second conductive elements from electrical communication when internal cell pressure exceeds a predetermined threshold;

(c) method (M2) of charging the battery pack comprises cells connected in series involving: (ib) applying a charge through the series of cells until the flexible member in one of the cells opens;

iib) removing the charge through the series of cells until the flexible member returns to the first position; and iiib) reapplying the charge through the series of cells; and

(d) method (M3) of charging the battery pack comprises cells connected in parallel involving: (ic) applying a charge through the series of cells until the flexible member in one of the cells opens; (iic) iterating the flexible member between a closed and open position; and (iiic) applying the charge to the higher charge capacity cell during step (iic).

USE - For determining charge termination point for a cell.

ADVANTAGE - The cell has faster charging rate; higher capacity than the other prior cells and also has increased cell life and discharge efficiency.

pp; 80 DwgNo 0/33

Title Terms: RECHARGE; ELECTROCHEMICAL; CELL; USEFUL; DETERMINE; CHARGE; TERMINATE; POINT; COMPRISE; OUTER; CAN; CONTAIN; INTERNAL; CAVITY; ELECTRODE; DISPOSABLE; CAVITY; SWITCH; ASSEMBLE; COMPRISE; FLEXIBLE; MEMBER

Derwent Class: L03; U24; X16

International Patent Class (Main): H01M-000/00; H02J-007/00

58/7,DE/54 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015851337

WPI Acc No: 2004-009164/200401

Back EMF monopole motor for charging *batteries***, has voltage bridge to transfer rectified back EMF energy to capacitor for storage and rotating switch commutator discharges stored voltage across recovery *battery***

Patent Assignee: BEDINI TECHNOLOGY INC (BEDI-N)

Inventor: BEDINI J C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030127928	A1	20030710	US 2001805762	A	20010313	200401 B
			US 2003359896	A	20030207	

Priority Applications (No Type Date): US 2001805762 A 20010313; US 2003359896 A 20030207

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030127928	A1	10		H02P-015/00	Div ex application US 2001805762
					Div ex patent US 6545444

Abstract (Basic): US 20030127928 A1

Abstract (Basic):

NOVELTY - The motor has a *battery*** for producing an initial energy and a unit that captures the energy in the form of back EMF, which results due to a *coil*** collapse. The *coil*** (13) has *multiple*** *windings*** with a pole piece (18b). A voltage bridge transfers the rectified back EMF energy to a capacitor (24) for storage and a rotating switch commutator discharges the stored voltage across a recovery *battery*** (29).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of producing a back EMF monopole motor.

USE - Used for charging *batteries***.

ADVANTAGE - The motor uses a small amount of energy from a primary

*battery*** to trigger a large input of available energy by supplying back EMF, thus increasing the potential energy and efficiency of the system. The motor retains the extra force for a period of time and applies back EMF to increase the angular momentum and kinetic energy of the rotor and flywheel. Less amount of energy is taken from the rotor and flywheel to overcome the reduced back EMF.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective side view of a monopole back EMF motor with single stator and single rotor.

- *Coil*** (13)
- Pole piece (18b)
- Voltage bridge rectifier (23)
- Capacitor (24)
- Recovery *battery***. (29)
- pp; 10 DwgNo 1/3

Title Terms: BACK; EMF; MONOPOLAR; MOTOR; CHARGE; *BATTERY***; VOLTAGE; BRIDGE; TRANSFER; RECTIFY; BACK; EMF; ENERGY; CAPACITOR; STORAGE; ROTATING; SWITCH; COMMUTATE; DISCHARGE; STORAGE; VOLTAGE; RECOVER; *BATTERY***

Derwent Class: X11; X16

International Patent Class (Main): H02P-015/00

58/7,DE/55 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015716048

WPI Acc No: 2003-778248/200373,

*Multiple*** *cell*** *battery*** structure comprises first *battery*** cell having *several*** *turns*** producing first voltage, and second *battery*** cell having *several*** *turns*** wound around the first *battery*** cell and producing second voltage

Patent Assignee: LITHIUM POWER TECHNOLOGIES INC (LITH-N)

Inventor: LONGHI A J; MUNSHI M Z A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030162086	A1	20030828	US 200282946	A	20020226	200373 B

Priority Applications (No Type Date): US 200282946 A 20020226

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030162086	A1	19		H01M-006/10	

Abstract (Basic): US 20030162086 A1

Abstract (Basic):

NOVELTY - *Multiple*** *cell*** *battery*** structure comprises a first *battery*** *cell*** having *several*** *turns*** producing a first voltage, and a second *battery*** *cell*** having *several*** *turns*** wound around the first *battery*** cell and producing a second voltage.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of producing a *multiple*** *cell*** *battery***, which comprises winding a first *battery*** *cell*** *several*** *turns*** around a *mandrel***, and winding a second *battery*** *cell*** *several*** *turns*** around the first *battery*** cell.

USE - As *multiple*** *cell*** *battery***.

ADVANTAGE - The use of external jumpers between *battery*** cells enables consecutively *wound*** *battery*** cells (10, 12, 14) to be

connected in any *series*** or *parallel*** fashion, thus eliminating the need for externally connecting *several*** single *cell*** *batteries*** to produce the desired voltages and currents.

DESCRIPTION OF DRAWING(S) - The figure is a simplified perspective end view of consecutively *wound*** *battery*** cells.

*Battery*** cells (10, 12, 14)

pp; 19 DwgNo 1/11

Title Terms: MULTIPLE; CELL; *BATTERY***; STRUCTURE; COMPRISE; FIRST; *BATTERY***; CELL; TURN; PRODUCE; FIRST; VOLTAGE; SECOND; *BATTERY***; CELL; TURN; WOUND; FIRST; *BATTERY***; CELL; PRODUCE; SECOND; VOLTAGE

Derwent Class: L03; X16

International Patent Class (Main): H01M-006/10

International Patent Class (Additional): H01M-006/42

58/7,DE/56 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015479572

WPI Acc No: 2003-541719/200351

Inductive component for adjusting oscillator frequency has a *coil*** with a total inductance, two tapping contacts on the *coil*** and a control circuit.

Patent Assignee: INFINEON TECHNOLOGIES AG (INFN)

Inventor: TIEBOUT M

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200352780	A1	20030626	WO 2002DE4463	A	20021205	200351 B
DE 10162263	A1	20030710	DE 10162263	A	20011218	200353
EP 1456859	A1	20040915	EP 2002799023	A	20021205	200460
			WO 2002DE4463	A	20021205	

Priority Applications (No Type Date): DE 10162263 A 20011218

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200352780 A1 G 35 H01F-017/00

Designated States (National): JP US

Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LU MC NL PT SE SI SK TR

DE 10162263 A1 H01F-021/02

EP 1456859 A1 G H01F-017/00 Based on patent WO 200352780

Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SI SK TR

Abstract (Basic): WO 200352780 A1

Abstract (Basic):

NOVELTY - An inductive component is integrated into an integrated circuit. A *coil*** (100) has a total inductance. Two tapping contacts (110) fit on the *coil***. A control circuit (111) has a switching element to adjust the number of windings between the two tapping contacts. The *coil*** has *several*** *windings*** (101) and two terminal contacts as well as an intermediate contact.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for a voltage-controlled oscillator with an inductive component and for an amplifier with an inductively controlled load.

USE - With *battery***-operated mobile telephones.

ADVANTAGE - The control circuit can alter the effective inductance

of the *coil***.

DESCRIPTION OF DRAWING(S) - The drawing shows a top view diagram of a fully differential *coil*** for the present invention.

*Coil*** (100)

Tapping contact (110)

Control circuit (111)

Winding (101)

pp; 35 DwgNo 1/9

Title Terms: INDUCTIVE; COMPONENT; ADJUST; OSCILLATOR; FREQUENCY; *COIL***; TOTAL; INDUCTANCE; TWO; TAP; CONTACT; *COIL***; CONTROL; CIRCUIT

Derwent Class: U12; U23; W01

International Patent Class (Main): H01F-017/00; H01F-021/02

International Patent Class (Additional): H01F-005/00; H01F-021/12; H01F-038/00; H01L-023/64; H01L-027/08

58/7,DE/57 (Item 6 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015308630

WPI Acc No: 2003-369564/200335

Method for controlling energy storage system having super capacitor

Patent Assignee: HYUNDAI MOTOR CO LTD (HYUN-N)

Inventor: LEE H D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2003006269	A	20030123	KR 200141976	A	20010712	200335 B

Priority Applications (No Type Date): KR 200141976 A 20010712

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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KR 2003006269 A 1 H02J-009/00

Abstract (Basic): KR 2003006269 A

Abstract (Basic):

NOVELTY - A method for controlling an energy storage system having a super capacitor is provided to prevent a *voltage*** dropping phenomenon of a battery and *lengthen*** a lifetime of the battery by forming the energy storage system with a super capacitor and the battery.

DETAILED DESCRIPTION - A DC/DC converter is inserted between a battery and an inverter. The DC/DC converter is connected in *parallel*** to the *battery***. A super capacitor is serially with the DC/DC converter. The super capacitor has storage capacity larger than the storage capacity of the battery. An energy storage system is formed by connecting the super capacitor in *parallel*** to the *battery*** in an electric vehicle. The DC/DC converter is adhered to an output terminal of the super capacitor in order to apply the same *voltage*** to the super capacitor and the battery. The super capacitor has a buffering function to prevent a variation of power of the battery.

pp; 1 DwgNo 1/10

Title Terms: METHOD; CONTROL; ENERGY; STORAGE; SYSTEM; SUPER; CAPACITOR

Derwent Class: U24; X12

International Patent Class (Main): H02J-009/00

58/7,DE/58 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX
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013805313

WPI Acc No: 2001-289525/200130

Detachable ink cartridge for digitizer pen, has ferrite core with one portion disposed in nose section and other portion separable from ink cartridge to expose sufficient length of writing end portion of cartridge

Patent Assignee: FINE POINT INNOVATIONS INC (FINE-N)

Inventor: CALDWELL S R; SHEKHEL A B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6204457	B1	20010320	US 97879556	A	19970620	200130 B

Priority Applications (No Type Date): US 97879556 A 19970620

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6204457	B1	8		G08C-021/00	

Abstract (Basic): US 6204457 B1

Abstract (Basic):

NOVELTY - *Several*** *turns*** of *coil*** (12) are wound around the ferrite core disposed in nose section (16). An ink cartridge is extended through a hole in the ferrite core. A portion (11B) of the ferrite core is permanently disposed in the nose section and the other portion (11A) of the ferrite core is separable from the ink cartridge to expose sufficient length of writing end portion of the cartridge.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Cordless digitizer pen;
- (b) Ink cartridge removal difficulty solving method

USE - For use in conjunction with electronic digitizers, digitizer tablets.

ADVANTAGE - The user easily grasps the exposed portion of the ink cartridge and removes it without the aid of a tool. The improved cordless digitizer pen transmits a strong pen signal to grid conductors of a digitizer table with low power dissipation and has long *battery*** life.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of digitizer pen.

Ferrite core portions (11A,11B)

*Coil*** (12)

Nose section (16)

pp; 8 DwgNo 5/7

Title Terms: DETACH; INK; CARTRIDGE; PEN; FERRITE; CORE; ONE; PORTION; DISPOSABLE; NOSE; SECTION; PORTION; SEPARATE; INK; CARTRIDGE; EXPOSE; SUFFICIENT; LENGTH; WRITING; END; PORTION; CARTRIDGE

Derwent Class: T01; T04

International Patent Class (Main): G08C-021/00

58/7,DE/59 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX
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013558184

WPI Acc No: 2001-042391/200106

Electrical power supply and recovery apparatus for saving energy in

powering electric appliances, includes switch between *battery*** and *coil***, and DC/DC converter, for increasing *voltage*** of battery, coupled between battery and switch

Patent Assignee: LIU P Y (LIUP-I)

Inventor: LIU P Y

Number of Countries: 026 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1054423	A1	20001122	EP 99109202	A	19990519	200106 B
JP 2000341869	A	20001208	JP 99149557	A	19990528	200113 N

Priority Applications (No Type Date): EP 99109202 A 19990519; JP 99149557 A 19990528

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1054423 A1 E 9 H01H-047/32

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI

JP 2000341869 A 4 H02J-007/00

Abstract (Basic): EP 1054423 A1

Abstract (Basic):

NOVELTY - The apparatus includes a *battery*** (10) in *series*** with a DC/DC converter (12) for increasing the *voltage*** of the battery, a switch (14), a *coil*** (15), a diode (16) and a capacitor (19). Another diode (18) couples a node between the first diode and capacitor to a node between battery and converter. The switch is operated to alternately actuate the *coil*** to generate a high *voltage*** and to output energy.

USE - For recovering wasted electrical power and for saving energy in the provision of power to electrical appliances such as motors, air conditioners, electric fans, etc.

DESCRIPTION OF DRAWING(S) - The drawing is an electric circuit illustrating the electrical power supply and recovery apparatus.

Battery (10)

DC/DC converter (12)

Switch (14)

*Coil*** (15)

Diodes (16,18)

Capacitor (19)

pp; 9 DwgNo 1/8

Title Terms: ELECTRIC; POWER; SUPPLY; RECOVER; APPARATUS; SAVE; ENERGY; POWER; ELECTRIC; APPLIANCE; SWITCH; BATTERY; *COIL***; DC; DC; CONVERTER; INCREASE; *VOLTAGE***; BATTERY; COUPLE; BATTERY; SWITCH

Derwent Class: U24; V03; V06; X12; X13; X25; X27

International Patent Class (Main): H01H-047/32; H02J-007/00

International Patent Class (Additional): H02M-003/158

58/7,DE/60 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013033760

WPI Acc No: 2000-205611/200018

Patch for mounting transponder module to inner surface of pneumatic tire has opening extending through first external surface to cavity in body of patch

Patent Assignee: GOODYEAR TIRE & RUBBER CO (GOOD)

Inventor: BROWN R W; POLLACK R S

Number of Countries: 087 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200007834	A2	20000217	WO 99US17403	A	19990729	200018	B
AU 9953913	A	20000228	AU 9953913	A	19990729	200030	
BR 9912848	A	20010508	BR 9912848	A	19990729	200129	
			WO 99US17403	A	19990729		
EP 1144208	A2	20011017	EP 99939663	A	19990729	200169	
			WO 99US17403	A	19990729		
JP 2002524326	W	20020806	WO 99US17403	A	19990729	200266	
			JP 2000563486	A	19990729		
US 6546982	B1	20030415	US 9895176	P	19980803	200329	
			WO 99US17403	A	19990729		
			US 2001744463	A	20010123		
EP 1144208	B1	20040331	EP 99939663	A	19990729	200426	
			WO 99US17403	A	19990729		
DE 6920916115	E	20040506	DE 99616115	A	19990729	200434	
			EP 99939663	A	19990729		
			WO 99US17403	A	19990729		

Priority Applications (No Type Date): US 9895176 P 19980803; US 2001744463
A 20010123

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200007834 A2 E 84 B60C-023/04

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9953913 A B60C-023/04 Based on patent WO 200007834

BR 9912848 A B60C-023/04 Based on patent WO 200007834

EP 1144208 A2 E B60C-023/04 Based on patent WO 200007834

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
LU MC NL PT SE

JP 2002524326 W 100 B60C-023/04 Based on patent WO 200007834

US 6546982 B1 B60C-019/00 Provisional application US 9895176

Based on patent WO 200007834

EP 1144208 B1 E B60C-023/04 Based on patent WO 200007834

Designated States (Regional): DE FR GB IT

DE 6920916115 E B60C-023/04 Based on patent EP 1144208

Based on patent WO 200007834

Abstract (Basic): WO 200007834 A2

Abstract (Basic):

NOVELTY - A patch (600) for mounting a transponder module (602) to an inner surface of a pneumatic tire has an opening (620) extending through the first external surface (612) to a cavity (622) in the body of the patch. The cavity is of the same size and shape as the transponder module. The patch body is made of a resilient material.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for mounting a transponder module in a pneumatic tire, which comprises affixing the invented patch to the inner surface of the tire; and inserting the transponder module through the opening into the cavity.

USE - For mounting a transponder module in a pneumatic tire.

ADVANTAGE - The invented patch are provided with an opening which

leads the transponder module to be inserted into the patch before or after it is affixed to an inside surface of a pneumatic tire. It facilitates the removal of the transponder module such as for repair or replacement. It makes the transponder module accessible while contained within the patch, e.g. for *battery*** replacement. At least a portion of the transponder module is exposed at ambient environment within the pneumatic tire for sensing air pressure.

DESCRIPTION OF DRAWING(S) - The figures show a top plan view of a patch, and a cross-sectional view of a transponder module disposed within the patch.

Patch (600)
 Transponder module (602)
 First external surface (612)
 Opening (620)
 Cavity (622)
 Lip (624)
 pp; 84 DwgNo 6A, 6B/14

Title Terms: PATCH; MOUNT; TRANSPONDER; MODULE; INNER; SURFACE; PNEUMATIC; OPEN; EXTEND; THROUGH; FIRST; EXTERNAL; SURFACE; CAVITY; BODY; PATCH

Derwent Class: A95; Q11; X25

International Patent Class (Main): B60C-019/00; B60C-023/04

International Patent Class (Additional): G01L-017/00

58/7,DE/61 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012988044

WPI Acc No: 2000-159897/200014

Multiphase power converter for an incoming AC transformer for use in multiphase AC motors

Patent Assignee: ROBICON CORP (ROBI-N)

Inventor: AIELLO M F; HAMMOND P W; MATESA J M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6014323	A	20000111	US 9755050	A	19970808	200014 B
			US 98130076	A	19980807	

Priority Applications (No Type Date): US 9755050 P 19970808; US 98130076 A 19980807

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6014323	A	19	H02M-007/00	Provisional application US 9755050

Abstract (Basic): US 6014323 A

Abstract (Basic):

NOVELTY - Each of *several*** secondary *windings*** (43,42,41) is connected to *multiple*** switching *cells*** (A3,B3,C3) each of which functions like a matrix converter. The windings can be either single or multi-phase and more than one transformer can be used so that the *multiple*** secondary *windings*** can be distributed among individual transformers. The outputs of at least two cells are connected in series. The cells can be either bi- or uni-directional and can have a three-phase input.

USE - In multiphase AC motors

ADVANTAGE - Reduces undesired harmonics on the primary and secondary, can provide power factor improvement depending upon

application

DESCRIPTION OF DRAWING(S) - The drawing shows a diagram of the invention for providing a four-quadrant variable-frequency AC drive.

Switching cells (A3-C3)

Secondary windings (41-43)

Motor (44)

pp; 19 DwgNo 3/28

Title Terms: MULTIPHASE; POWER; CONVERTER; INCOMING; AC; TRANSFORMER;

MULTIPHASE; AC; MOTOR

Derwent Class: X12; X13

International Patent Class (Main): H02M-007/00

58/7,DE/62 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012071193

WPI Acc No: 1998-488104/199842

Uninterruptable power supply - has transformer having *three***

*windings*** of which first and second are used for AC to DC conversion

Patent Assignee: OKI ELECTRIC IND CO LTD (OKID)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10210680	A	19980807	JP 9710964	A	19970124	199842 B

Priority Applications (No Type Date): JP 9710964 A 19970124

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10210680	A	5		H02J-007/34	

Abstract (Basic): JP 10210680 A

The UPS has a bridge diode (53) and a capacitor (54) which rectifies and smoothes an alternating voltage applied to terminals (51,52). A FET (56) supplies an alternating voltage to two windings (55b,55c) of a transformer (55). The transformer has *three*** *windings*** altogether. Diodes (61,62), a *coil*** (63) and a capacitor (64), produces a rectified and smoothed first DC output voltage.

A parasitic diode (71a) and a parasitic capacitor (73) along with an FET (71) rectifies and smoothes the alternating current generated in winding wire (55c) of the transformer to produce second DC voltage. A *battery*** stores the second DC voltage by charging. The internal resistance of switching element is controlled by the second DC voltage.

ADVANTAGE - Provides high conversion efficiency.

Dwg.1/3

Title Terms: UNINTERRUPTED; POWER; SUPPLY; TRANSFORMER; THREE; WIND; FIRST; SECOND; AC; DC; CONVERT

Derwent Class: U24

International Patent Class (Main): H02J-007/34

International Patent Class (Additional): H02J-007/00; H02J-009/06; H02M-003/28; H02M-007/06

58/7,DE/63 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011981090

WPI Acc No: 1998-398000/199834

*Battery*** having a multi-plate wound assembly - in which electrode plates having increasingly long connectors and separator sheets are wound in a folded, flat-*stack*** configuration to give a flat rather than *cylindrical*** final shape.

Patent Assignee: GREATBATCH LTD WILSON (GREW)

Inventor: CZAMARA D; KRAFT G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5776628	A	19980707	US 97885085	A	19970630	199834 B

Priority Applications (No Type Date): US 97885085 A 19970630

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5776628	A	7	H01M-006/10	

Abstract (Basic): US 5776628 A

A *battery*** comprising anode and cathode plates (12,14) connected by connectors (26,38) which are of increasingly greater *length*** when progressing from the first anode and cathode plate to the last anode and cathode plate. A separator (16) is located between the anode and cathode plates and the assembly is wound into a folded flat-*stack*** of plates and separator, the increasing *lengths*** of the electrode connectors being required to accommodate the increasing thickness of the *stack*** as it is folded and wound. An electrolyte activates and associates the anode and cathode electrodes.

ADVANTAGE - The construction is similar to the conventional *cylindrical*** jellyroll *wound*** *battery*** configuration, but the flat-folded multi-plate assembly provides a shape that can be housed in a prismatic, non-*cylindrical*** casing.

Dwg.1/5

Title Terms: *BATTERY***; MULTI; PLATE; WOUND; ASSEMBLE; ELECTRODE; PLATE; INCREASE; LONG; CONNECT; SEPARATE; SHEET; WOUND; FOLD; FLAT; *STACK***; CONFIGURATION; FLAT; *CYLINDER***; FINAL; SHAPE

Derwent Class: A85; L03; V01; X16

International Patent Class (Main): H01M-006/10

58/7,DE/64 (Item 13 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011582782

WPI Acc No: 1997-559263/199751

Inductively powered *battery*** charger for electric vehicles - has power winding connected directly to *battery*** and control winding that limits resonating current and interrupts charging process when suitable charge level is reached

Patent Assignee: AUCKLAND UNISERVICES LTD (AUCK-N)

Inventor: BOYS J T; GREEN A W

Number of Countries: 076 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9742695	A1	19971113	WO 97NZ53	A	19970502	199751 B
AU 9727154	A	19971126	AU 9727154	A	19970502	199813
EP 896758	A1	19990217	EP 97920994	A	19970502	199912
			WO 97NZ53	A	19970502	

AU 716214	B	20000224	AU 9727154	A	19970502	200020
NZ 332194	A	19991129	NZ 332194	A	19970502	200031
			WO 97NZ53	A	19970502	
US 6100663	A	20000808	WO 97NZ53	A	19970502	200040
			US 98180189	A	19981103	
JP 2000509955	W	20000802	JP 97539812	A	19970502	200042
			WO 97NZ53	A	19970502	
KR 2000010733	A	20000225	WO 97NZ53	A	19970502	200102
			KR 98708843	A	19981102	

Priority Applications (No Type Date): NZ 299396 A 19960917; NZ 286513 A 19960503

Cited Patents: US 4331911; US 4496896; US 5498950; US 5594318; US 5633577

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9742695 A1 E 23 H02J-007/00

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG

AU 9727154 A H02J-007/00 Based on patent WO 9742695

EP 896758 A1 E H02J-007/00 Based on patent WO 9742695

Designated States (Regional): DE DK ES FI FR GB IE IT NL SE

AU 716214 B H02J-007/00 Previous Publ. patent AU 9727154
Based on patent WO 9742695

NZ 332194 A H02J-007/00

US 6100663 A H02J-007/00 Based on patent WO 9742695

JP 2000509955 W 30 H02J-017/00 Based on patent WO 9742695

KR 2000010733 A H02J-007/00 Based on patent WO 9742695

Abstract (Basic): WO 9742695 A

The *battery*** charger has a control winding (304) and a power collection winding (402) in a tightly coupled relationship and sharing a ferrite core (401). The control winding has a large number of turns, so providing a high voltage and needing a smaller resonating capacitor to meet a given resonant frequency than a power *coil*** providing a low voltage. The control winding is equipped with a shorting switch of low current capacity, such as a pair of silicon controlled rectifiers. The non-resonant winding (402) has *few*** *turns*** and current from this winding is directly rectified and passed to the *battery***. Shorting of the resonant winding is an effective way of limiting peak secondary resonating current and to interrupt the charging process when a suitable level of charge has been reached.

ADVANTAGE - All cells are brought to same state of charge or depth of discharge

Dwg.4/8

Title Terms: INDUCTIVE; POWER; *BATTERY***; CHARGE; ELECTRIC; VEHICLE; POWER; WIND; CONNECT; *BATTERY***; CONTROL; WIND; LIMIT; RESONANCE; CURRENT; INTERRUPT; CHARGE; PROCESS; SUIT; CHARGE; LEVEL; REACH

Derwent Class: Q14; X16; X21

International Patent Class (Main): H02J-007/00; H02J-017/00

International Patent Class (Additional): B60L-011/18; H02J-007/04; H02J-007/12

58/7,DE/65 (Item 14 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011543691

WPI Acc No: 1997-520172/199748

Metal oxide semiconductor type solid state image pick-up - has controller provided inside unit cell, and which simultaneously *turns*** ON *several*** transfer transistor groups that transfer converted electric charge from respective photodiode to corresponding capacitors

Patent Assignee: TOSHIBA KK (TOKE)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9247536	A	19970919	JP 9655985	A	19960313	199748 B

Priority Applications (No Type Date): JP 9655985 A 19960313

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 9247536	A	10	H04N-005/335	

Abstract (Basic): JP 9247536 A

The solid state image pick-up includes *several*** unit *cells*** each has a respective photodiode group (1-1-1 to 1-1-3,1-2 to 1-1-2-3,1-3-1 to 1-3-3) that converts light to an electric charge. Transfer signal lines (32-1 to 32-3) are respectively provided to each unit cell to generate a transfer pulse signal. The generated transfer pulse signal is applied to the gate of each transfer transistor group (34-1-1 to 34-1-3,34-2-1 to 34-2-3,34-3-1 to 34-3-3) respectively provided between the corresponding photodiode and a corresponding capacitor (33-1-1 to 33-1-3,33-2-1 to 33-2-3,33-3-1 to 33-3-3) to the unit cell.

Each transfer transistor transfers the converted electric charge from the photodiode to the capacitor that is turned ON. Each capacitor holds the transferred electric charge from the photoelectric converter. A voltage output unit to each unit cell outputs predetermined voltage corresponding to the maintained electric charge in the capacitor. Each transfer transistor is simultaneously switched ON by a controller in the unit cell through the transfer pulse signal from the transfer signal line.

ADVANTAGE - Reduces time difference of image pick-up of each pixel.
Dwg.1/6

Title Terms: METAL; OXIDE; SEMICONDUCTOR; TYPE; SOLID; STATE; IMAGE; PICK-UP; CONTROL; UNIT; CELL; SIMULTANEOUS; TURN; TRANSFER; TRANSISTOR; GROUP; TRANSFER; CONVERT; ELECTRIC; CHARGE; RESPECTIVE; PHOTODIODE; CORRESPOND; CAPACITOR

Index Terms/Additional Words: MOS

Derwent Class: U13; W04

International Patent Class (Main): H04N-005/335

International Patent Class (Additional): H01L-027/146; H01L-031/10

58/7,DE/66 (Item 15 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011492104

WPI Acc No: 1997-470010/199743

Electrical storage device for driving electric vehicle - has plates wound in offset relationship so that on elongated side of cathode plate extends beyond elongated side edge of anode plate at first side, and vice versa

on other side

Patent Assignee: EV ENERGY SYSTEMS LTD (EVEN-N)

Inventor: AUDIT T E; WEST J K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5667907	A	19970916	US 9394711	A	19930721	199743 B
			US 93104221	A	19930811	
			US 94295106	A	19940824	
			US 95420691	A	19950412	

Priority Applications (No Type Date): US 93104221 A 19930811; US 9394711 A 19930721; US 94295106 A 19940824; US 95420691 A 19950412

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5667907	A	56	H01M-010/36	CIP of application US 9394711 Div ex application US 93104221 Div ex application US 94295106 Div ex patent US 5370711 Div ex patent US 5439488

Abstract (Basic): US 5667907 A

The storage device (40), for a vehicle including a frame, a number of wheels rotatably mounted on the frame, and an electric motor for driving the wheels, is connected to the motor for energising the motor, and comprises a casing (42) and *several*** connected *coiled*** *windings*** (44) disposed within the casing. Each winding includes a cathode plate (46) with a strip having elongated side edges (52,54), an anode plate (48) including a strip with elongated side edges (56,58), and a separator (50) between the plates.

The plates are wound in an offset relationship so that one elongated side edge of the cathode plate extends beyond one elongated side edge of the anode plate at a first side of the winding, and the other elongated side edge of the anode plate extends beyond the other elongated side edge of the cathode plate at a second side of the winding opposite the first side. An electrolyte material is located within each winding. Several current collectors (68) are disposed within the casing, where at least one of the current collectors is pressed against one of the first and second sides of each winding to contact the corresponding winding side at several locations on it.

USE/ADVANTAGE - Storage device may also be secured to wall of building where rechargeable power supply is required. Prevents wasting of plate capacity since only overlapping portions of plates are active when discharging.

Dwg.1a/35

Title Terms: ELECTRIC; STORAGE; DEVICE; DRIVE; ELECTRIC; VEHICLE; PLATE; WOUND; OFFSET; RELATED; SO; ELONGATE; SIDE; CATHODE; PLATE; EXTEND; ELONGATE; SIDE; EDGE; ANODE; PLATE; FIRST; SIDE; VICE; SIDE

Index Terms/Additional Words: RECHARGEABLE; *BATTERY***; BUILDING; WALL

Derwent Class: Q13; X16; X21

International Patent Class (Main): H01M-010/36

International Patent Class (Additional): B60K-001/00

58/7,DE/67 (Item 16 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011464583

WPI Acc No: 1997-442490/199741

Charging control apparatus of battery group used in electric vehicle - controls current flowing in bypass circuit to control charging amount of battery, until terminal *voltage*** of battery attains upper limit *voltage***

Patent Assignee: NISSAN MOTOR CO LTD (NSMO)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9200969	A	19970731	JP 965840	A	19960117	199741 B

Priority Applications (No Type Date): JP 965840 A 19960117

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 9200969	A	8	H02J-007/02	

Abstract (Basic): JP 9200969 A

The appts controls charging of a battery group (1) which comprises a number of batteries (1a-1n) connected in series. A bypass circuit is connected in *parallel*** to each *battery***. When the terminal *voltage*** (V_c) of battery attains target *voltage*** (V_s - (ϵ 0) which is less than upper limit *voltage*** (V_s), where ' ϵ 0 ' is predetermined value. The charging of the battery is made to conduct the bypass circuit. A calculator (7) calculates an inhibit amount (ϵ (i)) corresponding to the bypass current (i). The charging is performed until the terminal *voltage*** of battery attains upper limit *voltage***, to extend operating time of bypass circuit. The charging amount to the battery is thus controlled by controlling the current flowing in bypass circuit.

ADVANTAGE - *Lengthens*** substantial operation time of bypass circuit. Reduces variation in charging amount of each battery. Improves charging efficiency. Shortens charging termination time.

Dwg.1/5

Title Terms: CHARGE; CONTROL; APPARATUS; BATTERY; GROUP; ELECTRIC; VEHICLE; CONTROL; CURRENT; FLOW; CIRCUIT; CONTROL; CHARGE; AMOUNT; BATTERY; TERMINAL; *VOLTAGE***; BATTERY; ATTAIN; UPPER; LIMIT; *VOLTAGE***

Derwent Class: U21; U24; X16; X21

International Patent Class (Main): H02J-007/02

International Patent Class (Additional): H01M-010/44; H02J-007/00; H02J-007/10

58/7,DE/68 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011341403

WPI Acc No: 1997-319308/199729

Power rectifier for use with DC load e.g. for arc furnace, plasma torch - uses modulation control device connected relative to one of power cells so that voltage of respective individual power cells is controlled

Patent Assignee: HALMAR ROBICON GROUP (HALM-N)

Inventor: ABRAMS H; HAMMOND P; OPAL K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5638263	A	19970610	US 94203803	A	19940301	199729 B
			US 94351822	A	19941208	

Priority Applications (No Type Date): US 94351822 A 19941208; US 94203803 A 19940301

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 5638263 A 18 H02M-007/515 CIP of application US 94203803

Abstract (Basic): US 5638263 A

A power supply equipment and method where a multi-phase transformer having *multiple*** secondary *windings*** provides *multi***-phase power to *multiple*** power *cells***, each of which have a single direct current (DC) output and are controllable by a modulation controller. The primary and secondary windings in the power transformer may be star- or mesh-connected; the secondary windings may be shifted in phase.

Because the power cells can be connected in series, the maximum output voltage for each cell may be less than the maximum line-to-line voltage. The power cell output can have variable DC voltage and current which can be controlled using pulse-width modulation (PWM) techniques. Alternating current input power is converted to DC output power for each power output line. Output power modulation can be produced by interdigitating a selected number of carrier signals so that harmonic components reflected back to the input are attenuated.

USE/ADVANTAGE - For supplying DC power to low and medium voltage DC loads e.g. electrochemical process, DC motor, etc. Series connection of *cells*** enables *multiple*** voltage levels which can then be used in order to obtain improved waveforms.

Dwg.3/12

Title Terms: POWER; RECTIFY; DC; LOAD; ARC; FURNACE; PLASMA; TORCH; MODULATE; CONTROL; DEVICE; CONNECT; RELATIVE; ONE; POWER; CELL; SO; VOLTAGE; RESPECTIVE; INDIVIDUAL; POWER; CELL; CONTROL

Index Terms/Additional Words: AC-DC; CONVERTER; DC; MOTOR; ELECTROCHEMICAL; PROCESSES

Derwent Class: U24; V06; X12; X13; X14; X24; X25

International Patent Class (Main): H02M-007/515

58/7,DE/69 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011280529

WPI Acc No: 1997-258433/199723

Electric drive for use with multi-phase load, e.g. medium voltage, variable-speed AC induction motor - comprises multi-phase power transformer having *multiple*** secondary *windings*** which provides *multi***-phase power to *multiple*** power *cells***, each of which have single-phase output and are controllable by modulation controller

Patent Assignee: HALMAR ROBICON GROUP (HALM-N)

Inventor: HAMMOND P W

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5625545	A	19970429	US 94203803	A	19940301	199723 B

Priority Applications (No Type Date): US 94203803 A 19940301

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 5625545 A 21 H02M-007/515

Abstract (Basic): US 5625545 A

The electric drive comprises the multi-phase power transformer, having at least one primary winding circuit connected to a multi-phase AC power source, and a number of secondary winding circuits. A number of power cells each have an input connected with a respective one of the number of secondary winding circuits, and each power cell has a single-phase controllable output to such a multi-phase AC load. The number of power cells are serially connected with respective others of the power cells in each phase output line to such multi-phase AC load.

The modulation controller is connected to respective ones of the power cells, so that the output of the respective power cells is controlled. The number of power cells each have a rectifier electrically connected to a respective one of the number of secondary winding circuits and have an electrical output. The number of power cells includes a preselected number of power cells in series in each phase output line and the number of secondary winding circuits are spaced apart in electrical phase by a number of degrees equal to 60 divided by the preselected number thereby reducing harmonics in lines to the source. The modulation controller also has a device for selectively controlling a switching event of each of the power cells so that the switching event of respective one of the power cells in each phase output line is spaced in time from the switching event of respective others of the power cells in the respective phase output line thereby reducing harmonic components in such output lines to such load.

USE - E.g. for 2300 volt AC induction motor.

Dwg.1/11

Title Terms: ELECTRIC; DRIVE; MULTI; PHASE; LOAD; MEDIUM; VOLTAGE; VARIABLE ; SPEED; AC; INDUCTION; MOTOR; COMPRIZE; MULTI; PHASE; POWER; TRANSFORMER ; MULTIPLE; SECONDARY; WIND; MULTI; PHASE; POWER; MULTIPLE; POWER; CELL; SINGLE; PHASE; OUTPUT; CONTROL; MODULATE; CONTROL

Derwent Class: U21; X12; X13

International Patent Class (Main): H02M-007/515

58/7,DE/70 (Item 19 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010581859

WPI Acc No: 1996-078812/199609

AC generator for vehicle *battery*** charging - uses bridge type full wave rectifier to provide DC to *battery*** with AC voltage supplied to generator phase windings to increase phase difference

Patent Assignee: DENSO CORP (NPDE); NIPPONDENSO CO LTD (NPDE)

Inventor: KAJIURA H; MASE A

Number of Countries: 005 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 693816	A1	19960124	EP 95111268	A	19950718	199609 B
JP 8214470	A	19960820	JP 95126171	A	19950525	199643
US 5663631	A	19970902	US 95499003	A	19950706	199741
EP 693816	B1	19991229	EP 95111268	A	19950718	200005
DE 69514162	E	20000203	DE 614162	A	19950718	200013
			EP 95111268	A	19950718	
JP 3389740	B2	20030324	JP 95126171	A	19950525	200323

Priority Applications (No Type Date): JP 94296116 A 19941130; JP 94167236 A 19940719

Cited Patents: 4.Jnl.Ref; DE 4007350; EP 357183; EP 464694; JP 4138030; JP 4295236; JP 5292799; WO 9214298

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 693816		A1	E	35 H02J-007/14	
Designated States (Regional): DE FR GB					
JP 8214470		A	17	H02J-007/16	
US 5663631		A	33	H02P-009/44	
EP 693816		B1	E	H02J-007/14	
Designated States (Regional): DE FR GB					
DE 69514162		E		H02J-007/14	Based on patent EP 693816
JP 3389740		B2	18	H02J-007/16	Previous Publ. patent JP 8214470

Abstract (Basic): EP 693816 A

An alternator (1) with a rotor (3), has a field *coil*** (2) and poles, and a stator (5) with an armature *coil*** (4) and core. A field exciting circuit supplies current to the field *coil***. A full wave rectifier converts the AC voltage from the armature *coil*** into a DC voltage. A voltage applying circuit applies controlled AC voltages to the armature *coil***.

Magnetic sensors (6,7,8) detect the relative position of the magnetic flux between the field and armature *coils***. A circuit (9) amplifies the sensor signals which a phase control circuit (10) uses to control the voltage applying circuit. The field circuit is controlled by a control circuit (11).

ADVANTAGE - Provides increased power output at low speed without an increase in size.

Dwg.1/40

Abstract (Equivalent): US 5663631 A

An AC generator for supplying electric power to a load comprising: a magnetic field member having a field *coil*** for generating magnetic flux responsive to an electric field current supplied to said field *coil***;

an armature member having an armature *coil*** including *multi***-phase *windings*** for generating an induced phase voltage in each of said phase-windings and providing a line voltage between each pair of said *multi***-phase *windings*** responsive to said armature member being rotated relative to said magnetic field member;

a bridge-type full-wave rectifying circuit connected to said *multi***-phase *windings*** for supplying an output-DC-voltage to said load;

a switching circuit also connected to said *multi***-phase *windings*** and outputting a control-AC-voltage, which is provided to said armature *coil***; and

a driving circuit connected to said switching circuit, said driving circuit causing said control-AC-voltage output by said switching circuit to lag a first prescribed electric angle behind a corresponding one of said induced-phase voltages and a current flowing through said corresponding one of said phase-windings to lead said corresponding one of said line-voltages by a second prescribed electric angle.

Dwg.1/40

Title Terms: AC; GENERATOR; VEHICLE; *BATTERY***; CHARGE; BRIDGE; TYPE; FULL; WAVE; RECTIFY; DC; *BATTERY***; AC; VOLTAGE; SUPPLY; GENERATOR; PHASE; WIND; INCREASE; PHASE; DIFFER

Derwent Class: X12; X13; X16; X22

International Patent Class (Main): H02J-007/14; H02J-007/16; H02P-009/44

International Patent Class (Additional): H02J-007/24; H02M-007/219; H02P-009/30; H02P-009/48

58/7,DE/71 (Item 20 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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010556489

WPI Acc No: 1996-053442/199606

Power supply circuit of telemeter for rotating machine - has permanent magnet which is arranged on inner wall of frame which is inside of stator of turbo generator

Patent Assignee: FUJI ELECTRIC CO LTD (FJIE)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7298556	A	19951110	JP 9490404	A	19940428	199606 B

Priority Applications (No Type Date): JP 9490404 A 19940428

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 7298556	A	8	H02K-011/00	

Abstract (Basic): JP 7298556 A

The power supply circuit (1) has one pair of magnets (13,14), a *coil*** (11) and a pole shoe (12). The one pole-tip side of the magnets which are mutually polarized by the reverse polarity is fixed in the inner wall of a frame (99), made of steel, by the side of the stator of a turbo generator. The pole shoe, which is formed by a multi layer body of a silicon steel plate, is fixed on the circumferential surface of a rotary shaft (92) made up of steel. The rectangle like *coil*** with two terminals (11a,11b) is wound on an insulated conductor. When the quantity of *coil*** and the flux obtained from permanent magnets to penetrate the *coil*** are synchronized with the rotating shaft, alternating voltage of same frequency is developed between the terminals of the *coil***.

The power generated from the *coil*** is supplied to the transmitting part of the telemeter which is mounted on the rotor on a rotating machine with a stator. The rotor is supported by a stator through the rotary shaft of the rotating machine externally. The transmitting part outputs the information by the side of the rotor and is received by a non-contact side of the receiver, which outputs the signal corresponding to the information.

ADVANTAGE - Avoids *battery*** switching. Simplifies composition of telemeter. Generates alternating *voltage***. Shortens axial *length*** of rotating shaft.

Dwg.1/7

Title Terms: POWER; SUPPLY; CIRCUIT; TELEMETRY; ROTATING; MACHINE; PERMANENT; MAGNET; ARRANGE; INNER; WALL; FRAME; STATOR; TURBO; GENERATOR

Derwent Class: W05; X11

International Patent Class (Main): H02K-011/00

International Patent Class (Additional): H02K-019/36; H02K-021/26

58/7,DE/72 (Item 21 from file: 350).
 DIALOG(R)File 350:Derwent WPIX
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010468895

WPI Acc No: 1995-370214/199548

Non-aqueous electrolytic *battery*** for video camera - with winding of

thin layered electrodes to form *coiled*** object having *multiple***
*turns***

Patent Assignee: HAIBARU YG (HAIB-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7249429	A	19950926	JP 9479151	A	19940310	199548 B

Priority Applications (No Type Date): JP 9479151 A 19940310

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 7249429	A	6	H01M-010/04	

Abstract (Basic): JP 7249429 A

The *battery*** mainly consists of thin sheets of a positive electrode (1), a negative electrode (2) and a separator (3). The separator is sandwiched between the positive and negative electrodes.

The sheets are wound one over the other to form a *coiled*** object having n or more turns. The *coiled*** object is then impregnated with a suitable electrolyte and is kept within an air tight *battery*** can (4). A negative lead (5) and a positive lead (7) are drawn out for external use from the negative and positive electrodes respectively.

ADVANTAGE - Reduces electrode length. Reduces winding time.

Simplifies manufacture.

Dwg.1/4

Title Terms: NON; AQUEOUS; ELECTROLYTIC; *BATTERY***; VIDEO; CAMERA; WIND; THIN; LAYER; ELECTRODE; FORM; *COIL***; OBJECT; MULTIPLE; TURN

Derwent Class: L03; W04; X16

International Patent Class (Main): H01M-010/04

International Patent Class (Additional): H01M-006/16; H01M-010/38

58/7,DE/73 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010466825

WPI Acc No: 1995-368144/199548

High frequency transformer for inductively coupled probe of electric vehicle *battery*** charger - has liquid coolant flow turn connected in *series*** with normally designated high frequency winding

Patent Assignee: HUGHES AIRCRAFT CO (HUGA)

Inventor: HALL J T; KIM E; RAMOS S; TANZER H J

Number of Countries: 015 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 680055	A1	19951102	EP 95106442	A	19950428	199548 B
JP 8064442	A	19960308	JP 95106068	A	19950428	199620
TW 288227	A	19961011	TW 95109213	A	19950902	199708
MX 9502012	A1	19980701	MX 952012	A	19950428	200012 N

Priority Applications (No Type Date): US 94237494 A 19940429; MX 952012 A 19950428

Cited Patents: DE 2645536; DE 4326583; EP 552738; US 2836802; US 3518394; US 3878492; WO 8400638

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 680055	A1	E	11 H01F-027/28	

Designated States (Regional): BE CH DE DK ES FR GB GR IT LI NL SE

JP 8064442 A 7 H01F-038/14
 MX 9502012 A1 H01F-027/08
 TW 288227 A H02M-005/10

Abstract (Basic): EP 680055 A

The transformer includes a primary winding which includes a hollow metallic coolant turn which transmits a cooling fluid. A secondary winding includes *several*** conductive *turns*** which are coupled to the primary winding. The coolant turns is a flat *helix*** winding or a flat *spiral*** winding. The primary winding also includes *several*** conductive *turns***.

The additional conductive turns are thermally bonded by an adhesive to the coolant turn. Each of the conductive turns of the primary winding is a flat *spiral*** winding. The primary winding includes an inductively coupled probe. An outer turn of the secondary winding is a coolant turn.

ADVANTAGE - Reduces copper loss and therefore power loss. Improved cooling. Reduced size.

Dwg.2/9

Title Terms: HIGH; FREQUENCY; TRANSFORMER; INDUCTIVE; COUPLE; PROBE; ELECTRIC; VEHICLE; *BATTERY***; CHARGE; LIQUID; COOLANT; FLOW; TURN; CONNECT; *SERIES***; NORMAL; DESIGNATED; HIGH; FREQUENCY; WIND

Derwent Class: V02; X16; X21

International Patent Class (Main): H01F-027/08; H01F-027/28; H01F-038/14; H02M-005/10

International Patent Class (Additional): H01B-007/34; H01F-027/10; H02J-017/00

58/7,DE/74 (Item 23 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010307546

WPI Acc No: 1995-208804/199528

Battery use system for prolonging use-time of battery driven portable electronic equipment, e.g. portable telephone - has chargeable battery serving as direct power supply source, and second *battery*** connected in *parallel*** through switch, with *voltage*** detection circuit and current consumption detection circuit controlling operation of switch

Patent Assignee: NEC CORP (NIDE)

Inventor: TATSUMI S

Number of Countries: 005 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 657982	A1	19950614	EP 94118322	A	19941121	199528	B
JP 7154924	A	19950616	JP 93296490	A	19931126	199533	
US 5568038	A	19961022	US 94344347	A	19941122	199648	
EP 657982	B1	19980225	EP 94118322	A	19941121	199812	
DE 69408643	E	19980402	DE 608643	A	19941121	199819	
			EP 94118322	A	19941121		

Priority Applications (No Type Date): JP 93296490 A 19931126

Cited Patents: 2.Jnl.Ref; EP 437129; GB 2249677; JP 5095634; US 4458111

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 657982 A1 E 9 H02J-007/00

Designated States (Regional): DE GB IT

JP 7154924 A 5 H02J-007/00

US 5568038 A 9 H01M-010/46
 EP 657982 B1 E 10 H02J-007/00
 Designated States (Regional): DE GB IT
 DE 69408643 E H02J-007/00 Based on patent EP 657982

Abstract (Basic): EP 657982 A

The system has a main battery (1) serving as a direct current power supply and a second battery (2) connected in parallel through a switch (3). The output *voltage*** from the main battery is detected, and the state of current consumption is also detected of the portable electronic equipment.

The switch is opened and closed based on the output from the *voltage*** detection circuit (4) and the output from the current consumption circuit (5). The switch is closed to charge the main battery by the second battery when the output *voltage*** from the first battery becomes smaller than a predetermined value, and at the same time, the consumption current is sufficiently small.

USE/ADVANTAGE - For cellular radiotelephone. Provides battery system capable of prolonging *length*** of time battery can be used with high degree of safety.

Dwg.4/6

Abstract (Equivalent): EP 657982 B

The system has a main battery (1) serving as a direct current power supply and a second battery (2) connected in parallel through a switch (3). The output *voltage*** from the main battery is detected, and the state of current consumption is also detected of the portable electronic equipment.

The switch is opened and closed based on the output from the *voltage*** detection circuit (4) and the output from the current consumption circuit (5). The switch is closed to charge the main battery by the second battery when the output *voltage*** from the first battery becomes smaller than a predetermined value, and at the same time, the consumption current is sufficiently small.

USE/ADVANTAGE - For cellular radiotelephone. Provides battery system capable of prolonging *length*** of time battery can be used with high degree of safety.

Dwg.4/6

Abstract (Equivalent): US 5568038 A

A battery system for battery-driven portable electronic equipment, comprising a first battery chargeable and serving as a direct power supply source, a second *battery*** connected *parallel*** to said first battery through a switch, a *voltage*** detection circuit detecting an output *voltage*** from said first battery, consumption current detection circuit detecting a state of a consumption current of said portable electronic equipment, and switch control circuit controlling opening and closing of said switch in accordance with an output from said *voltage*** detection circuit and an output from said consumption current detection circuit, wherein said switch is closed to charge said first battery by said second battery when the output *voltage*** from said first battery becomes smaller than a predetermined value and the consumption current is sufficiently small, and

said portable electronic equipment is a cellular radio telephone set or a mobile radio telephone set of a portable type, said consumption current detection circuit is a circuit for detecting a busy/non-busy state of said telephone, and said switch is closed to charge said first battery by said second battery when the output *voltage*** from said battery becomes smaller than the predetermined value in a non-busy state of said telephone.

(Dwg.5/6

Title Terms: BATTERY; SYSTEM; PROLONG; TIME; BATTERY; DRIVE; PORTABLE; ELECTRONIC; EQUIPMENT; PORTABLE; TELEPHONE; CHARGE; BATTERY; SERVE; DIRECT; POWER; SUPPLY; SOURCE; SECOND; BATTERY; CONNECT; PARALLEL; THROUGH; SWITCH; *VOLTAGE***; DETECT; CIRCUIT; CURRENT; CONSUME; DETECT; CIRCUIT; CONTROL; OPERATE; SWITCH

Index Terms/Additional Words: CELLULAR; RADIOTELEPHONE

Derwent Class: U24; W01; X16

International Patent Class (Main): H01M-010/46; H02J-007/00

International Patent Class (Additional): H01M-010/44; H02J-003/32; H02J-007/34; H04B-007/26

58/7,DE/75 (Item 24 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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009991654

WPI Acc No: 1994-259365/199432

Electromagnetic feeder used in *battery***-driven car - has primary and secondary exciting *coils*** to which power is supplied according to load

Patent Assignee: TOYODA AUTOMATIC LOOM WORKS (TOYX); TOYODA JIDOSHOKKI SEISAKUSHO KK (TOYX)

Inventor: ITO M

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 6189479	A	19940708	JP 92334241	A	19921215	199432 B
US 5539296	A	19960723	US 93165975	A	19931213	199635

Priority Applications (No Type Date): JP 92334241 A 19921215

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 6189479 A 6 H02J-017/00

US 5539296 A 10 H02J-007/00 Cont of application US 93165975

Abstract (Basic): JP 6189479 A

The electromagnetic feeder has a primary core over which the primary *coil*** winding is formed (3,3a and 3b). The air-gap between the primary, and secondary exciting *coil*** (11,21) along with the windings complete the magnetic circuit. In one type, the secondary winding depends on the number of secondary cores. The air-gap, primary core and winding form the closed circuit.

According to the required output voltage, one secondary exciting *coil*** is selected from two or more secondary exciting *coils***.

Occasionally simultaneous winding of two or more secondary exciting *coils*** is carried out at the core of primary *coil*** winding.

ADVANTAGE - Provides easy device composition. Supplies power according to load requirements.

Dwg.1/5

Abstract (Equivalent): US 5539296 A

A method of charging a plurality of different types of *batteries*** of electrically powered vehicles, comprising:

providing a common primary winding having a fixed number of winding turns which is electrically connected with a source of charging current;

providing a *plurality*** of secondary *windings*** each of which is associated with a *battery*** of a given type and carried by a

vehicle with at least two of said secondary winding having different numbers of winding turns where the number of winding turns is related to the type *battery*** with which the respective secondary winding is associated; and

selecting at least one of said secondary windings for inductively coupling with said primary winding to form a closed magnetic circuit therebetween, whereby a secondary voltage, the magnitude of which is dependent on the turn ratio between said primary winding and said selected secondary winding, is induced electromagnetically across said selected secondary winding.

Dwg.3/5

Title Terms: ELECTROMAGNET; FEED; *BATTERY***; DRIVE; CAR; PRIMARY; SECONDARY; EXCITATION; *COIL***; POWER; SUPPLY; ACCORD; LOAD

Derwent Class: Q14; X12; X21

International Patent Class (Main): H02J-007/00; H02J-017/00

International Patent Class (Additional): B60L-011/18; H01F-023/00; H01F-027/30

58/7,DE/76 (Item 25 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009726824

WPI Acc No: 1994-006674/199401

*Fuel*** *cell*** array - comprises *tubular*** elongated *fuel*** *cells*** with a system of opposed opposite interconnections which facilitates increased row *voltage*** and row *length***

Patent Assignee: WESTINGHOUSE ELECTRIC CORP (WESE)

Inventor: DRAPER R; ZYMBOLY G E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5273838	A	19931228	US 92957114	A	19921007	199401 B

Priority Applications (No Type Date): US 92957114 A 19921007

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5273838	A	7		H01M-008/10	

Abstract (Basic): US 5273838 A

*Fuel*** *cell*** array comprises *tubular*** elongated *fuel*** *cells*** (12) placed in rows (A,B,C,D), each cell contg. inner (14) and outer (18) electrodes with interposed solid electrolyte (16). The electrolyte and outer electrode are discontinuous, having two portions, and provide at least two opposed discontinuities which contain at least two opposite opposed interconnections (20,20') contacting the inner electrode (14). Each cell has only three metallic felt electrical connectors (22) which contact surrounding cells, where each row is electrically connected to the other.

ADVANTAGE - Use of opposite opposed interconnections eliminates bowing in long (1m) cells and help eliminate the support tube. The circuiting of the cells provides twice the incremental stack voltage per raw relative to existing practice.

Dwg.1/5

Title Terms: FUEL; CELL; ARRAY; COMPRISE; TUBE; ELONGATE; FUEL; CELL; SYSTEM; OPPOSED; OPPOSED; INTERCONNECT; FACILITATE; INCREASE; ROW; VOLTAGE; ROW; LENGTH

Derwent Class: L03; X16

International Patent Class (Main): H01M-008/10

58/7,DE/77 (Item 26 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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009702998

WPI Acc No: 1993-396551/199350

Charging circuit for rechargeable *battery*** - uses constant current
charging up to set voltage and then constant voltage chargingPatent Assignee: SMH MANAGEMENT SERVICES AG (SMHM-N); SWATCH GROUP
MANAGEMENT SERVICES AG (SWAT-N)

Inventor: JEANNERET R; JANNERET R

Number of Countries: 015 Number of Patents: 015

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 573832	A1	19931215	EP 93108258	A	19930521	199350 B
FR 2691853	A1	19931203	FR 926691	A	19920601	199401
CZ 9301040	A3	19931215	CZ 931040	A	19930601	199405
JP 6038390	A	19940210	JP 93152609	A	19930601	199411
TW 234789	A	19941121	TW 93104452	A	19930602	199506
CN 1079589	A	19931215	CN 93106219	A	19930529	199513
US 5412305	A	19950502	US 9368106	A	19930528	199523
CZ 284919	B6	19990414	CZ 931040	A	19930601	199921
EP 573832	B1	19990908	EP 93108258	A	19930521	199941
DE 69326283	E	19991014	DE 93626283	A	19930521	199949
			EP 93108258	A	19930521	
RU 2115207	C1	19980710	RU 9346411	A	19930531	200001
ES 2138604	T3	20000116	EP 93108258	A	19930521	200011
KR 317065	B	20020219	KR 939626	A	19930531	200257
JP 3394286	B2	20030407	JP 93152609	A	19930601	200324
CN 1034147	C	19970226	CN 93106219	A	19930529	200452

Priority Applications (No Type Date): FR 926691 A 19920601

Cited Patents: 01Jnl.Ref; US 3493837; US 4238721; US 5003244; WO 9206525

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 573832 A1 F 17 H02J-007/00

Designated States (Regional): CH DE ES GB IT LI SE

FR 2691853 A1 H02J-007/02

CZ 9301040 A3 H02J-007/02

JP 6038390 A H02J-007/02

TW 234789 A H02J-007/10

CN 1079589 A H02J-007/00

US 5412305 A 13 H02J-007/08

CZ 284919 B6 H02J-007/02

Previous Publ. patent CZ 9301040

EP 573832 B1 F H02J-007/00

Designated States (Regional): CH DE ES GB IT LI SE

DE 69326283 E H02J-007/00

Based on patent EP 573832

RU 2115207 C1 H02J-007/08

ES 2138604 T3 H02J-007/00

Based on patent EP 573832

KR 317065 B H02J-007/00

JP 3394286 B2 12 H02J-007/02

Previous Publ. patent JP 6038390

CN 1034147 C H02J-007/00

Abstract (Basic): EP 573832 A

The charger has a source of alternating current (6) with
*multiple*** secondary *windings*** (3). Each secondary winding

supplies a charging circuit that has a rectifier circuit and a control circuit, and supplies a group of the cells making up the *battery***. The charging circuit delivers a constant current when the terminal potential is lower than a preset reference voltage, and constant potential when terminal voltage exceeds the reference.

The charger control has an internal supply, with a rectifier and regulator, to supply a direct voltage dependent on the value of the charging control signal. A measure of charging current is compared to a reference and the difference integrated to produce the charging control signal when terminal voltage is below the reference potential.

ADVANTAGE - Prevents damage to cells that are of smaller capacity than others in *battery***.

Dwg.1/3

Abstract (Equivalent): US 5412305 A

The appts. has a source for producing a first a.c. voltage and numerous discrete charging circuits charging a corresponding group of *multiple*** groups of *cells***. Each of the charging circuits has charging terminals for connection to corresponding group terminals of the corresponding group of the *multiple*** groups of *cells***. One of the group terminals is positive and the other negative.

Group terminals other than the positive and negative accumulator terminals are connected such that all of the cells of the accumulator are connected in series with one another. Each of the charging circuits has a respective transformer with a primary winding connected to the source and a secondary winding. A rectifier has inputs connected to the secondary winding and outputs connected to the charging terminals.

ADVANTAGE - Low risk of accumulator damage during charging if one cell has lower capacity than other.

(Dwg.1/3

Title Terms: CHARGE; CIRCUIT; RECHARGE; *BATTERY***; CONSTANT; CURRENT; CHARGE; UP; SET; VOLTAGE; CONSTANT; VOLTAGE; CHARGE

Derwent Class: U24; X16

International Patent Class (Main): H02J-007/00; H02J-007/02; H02J-007/08; H02J-007/10

International Patent Class (Additional): H02H-007/18; H02M-003/338

58/7,DE/78 (Item 27 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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009564509

WPI Acc No: 1993-258057/199332

Electrical system for use in hand-held battery operated light curing device - has microprocessor activated by *battery*** to provide *series*** of square wave signals to light curing lamp, such that light output is constant over selected period of time

Patent Assignee: KENNEDY J (KENN-I); EFOS INC (EFOS-N)

Inventor: KENNEDY J

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5233283	A	19930803	US 91801937	A	19911203	199332 B
CA 2056908	A	19930605	CA 2056908	A	19911204	199334 N
CA 2056908	C	20000919	CA 2056908	A	19911204	200054 N

Priority Applications (No Type Date): US 91801937 A 19911203; CA 2056908 A 19911204

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5233283	A		5	H02J-007/00	
CA 2056908	A			H05B-041/34	
CA 2056908	C	E		F21L-007/00	

Abstract (Basic): US 5233283 A

The electrical system located in a portable battery operated light generating device includes a light lamp operative to generate a light energy output. A battery is coupled to the lamp and provides electrical *voltage*** for activating the lamp. A microprocessor is coupled to the lamp and to the battery and in response to the energy condition in the *battery*** generates a *series*** of electrical pulse signals.

A transistor connected to the microprocessor and to the battery receives the pulse signals from the microprocessor to operate in a series of varying ON and constant OFF intervals to conduct the pulse signals to the lamp for maintaining the light output from the lamp at a constant level. A mode selector is coupled to the microprocessor and controls the *length*** of time the light lamp is activated by the electrical *voltage***.

USE/ADVANTAGE - Light cured composites for dental restorations, provides fast charging circuit for recharging battery over short period of time.

ar

Dwg.1/3

Title Terms: ELECTRIC; SYSTEM; HAND; HELD; BATTERY; OPERATE; LIGHT; CURE; DEVICE; MICROPROCESSOR; ACTIVATE; BATTERY; SERIES; SQUARE; WAVE; SIGNAL; LIGHT; CURE; LAMP; LIGHT; OUTPUT; CONSTANT; SELECT; PERIOD; TIME

Derwent Class: Q71; S05; X16; X26

International Patent Class (Main): F21L-007/00; H02J-007/00; H05B-041/34

58/7,DE/79 (Item 28 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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009490787

WPI Acc No: 1993-184322/199323

Reduction circuitry for filtering vehicle alternator ripple - provides switch in *series*** between system voltage and voltage regulating circuit and closed switch at predetermined phase of voltage

Patent Assignee: SGS THOMSON MICROELTRN INC (SGSA)

Inventor: FALATER S L

Number of Countries: 006 **Number of Patents:** 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 545617	A1	19930609	EP 92310764	A	19921125	199323 B
JP 5308800	A	19931119	JP 92316707	A	19921126	199351
US 5389870	A	19950214	US 91801765	A	19911129	199512
			US 9359008	A	19930506	
EP 545617	B1	19970122	EP 92310764	A	19921125	199709
DE 69217007	E	19970306	DE 617007	A	19921125	199715
			EP 92310764	A	19921125	
JP 3469602	B2	20031125	JP 92316707	A	19921126	200380

Priority Applications (No Type Date): US 91801765 A 19911129; US 9359008 A 19930506

Cited Patents: 01Jnl.Ref; JP 3086100; US 4128799; US 4223363; US 4599552; US 4872127; JP 3086100

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 545617				4 H02P-009/30	
Designated States (Regional): DE FR GB IT					
JP 5308800			A	H02P-009/14	
US 5389870			A	4 H02J-007/14	Cont of application US 91801765
EP 545617			B1	E 6 H02P-009/30	
Designated States (Regional): DE FR GB IT					
DE 69217007			E	H02P-009/30	Based on patent EP 545617
JP 3469602			B2	3 H02P-009/14	Previous Publ. patent JP 5308800

Abstract (Basic): EP 545617 A

The circuitry comprises a switch connected in *series*** between a system voltage and the regulating circuit. The switch is closed at a predetermined phase of the voltage of one of the stator windings of the alternator. The switch closing device operates at a conduction switchover point among the stator windings and comprises an integrator for an output voltage from the alternator.

The integrator operates on the voltage during a fixed fraction of the time cycle period of one of the windings of the stator *coils***.

ADVANTAGE - Automatically adapts to operating mode and speed of alternator with which it is used.

tw

Dwg.1/2

Abstract (Equivalent): EP 545617 B

A circuit in a vehicle system for reducing the ripple in an output of a multi-phase alternator having an alternator field winding and a *plurality*** of stator *windings*** (12), said vehicle system having a regulating circuit (24) having an output (26) for delivering a signal to the alternator field winding to regulate the output of the alternator, characterised by: a switch (20) connected in *series*** between a system *battery*** voltage (21) and the regulating circuit (24); said switch (20) being connected to receive a signal (13) produced by one of the stator windings (12) to be momentarily closed in response to a voltage waveform of said one of the stator windings at a predetermined phase of the voltage of said one of the stator windings (12) at a conduction switch over point among the stator windings.

Dwg.1/2

Abstract (Equivalent): US 5389870 A

The circuit for use in a vehicle system having a regulating circuit that regulates the output of the alternator, comprises a switch connected in *series*** between a system *battery*** voltage and the regulating circuit. The switch is connected to receive a signal produced by one of the stator windings to be closed in response to a voltage waveform of the one of the stator windings at a predetermined phase of the voltage of the one of the stator windings at a conduction switch-over point among the stator windings.

The switch is timed to be closed to produce an aliased waveform for application to the regulating circuit. An integrator integrates an input voltage to the regulating circuit during a fixed fraction of a time cycle period of the one of the stator windings.

USE/ADVANTAGE - For use in vehicle system for reducing ripple in output of multi-phase alternator having number of stator windings. Reduces or eliminates need for analog filters from sensing channel of alternator.

Dwg.1/2

Title Terms: REDUCE; CIRCUIT; FILTER; VEHICLE; ALTERNATOR; RIPPLE; SWITCH; *SERIES***; SYSTEM; VOLTAGE; VOLTAGE; REGULATE; CIRCUIT; CLOSE; SWITCH; PREDETERMINED; PHASE; VOLTAGE

Derwent Class: X12; X13; X16; X22

International Patent Class (Main): H02J-007/14; H02P-009/14; H02P-009/30
 International Patent Class (Additional): H02J-007/24

58/7,DE/80 (Item 29 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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009487494

WPI Acc No: 1993-181029/199322

Quasi-circular magnetic field forming - involves generating three-phase stepped voltages with number of steps per period in excess of three

Patent Assignee: SAMARA POLY (SAMA-R)

Inventor: GRACHEV P YU; KOSTYREV M L; TOKAR I I

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1741242	A1	19920615	SU 4814815	A	19891222	199322 B

Priority Applications (No Type Date): SU 4814815 A 19891222

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 1741242	A1		4	H02M-007/48	

Abstract (Basic): SU 1741242 A

Static converter consists of two *three***-phase inverter *cells*** (1,2) connected to the dc supply (3) equipped with the zero rail. The inverter *cell*** *three***-phase outputs are connected with the *three***-phase primary *windings*** (4,5) of the transformer (6) and with the cylindrical core in which the rotating magnetic field is generated. An ac load is connected to the output secondary winding (7).

The inverter cells (1,2) form at the output two symmetrical three-phase stepped voltage signals shifted by 15 degrees. Each of the phase voltages can be a stepped form close to sinusoidal. In order to eliminate the auxiliary transformers the inverters have transformerless outputs.

USE/ADVANTAGE - Device is used in static converters (inverters) with a rotating magnetic field. Conversion efficiency is increased by the introduction of a common magnetic core. Bul. 22/15.6.92

Dwg.1/2

Title Terms: QUASI; CIRCULAR; MAGNETIC; FIELD; FORMING; GENERATE; THREE-PHASE; STEP; VOLTAGE; NUMBER; STEP; PER; PERIOD; EXCESS; THREE

Derwent Class: X12

International Patent Class (Main): H02M-007/48

58/7,DE/81 (Item 30 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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009214256

WPI Acc No: 1992-341676/199242

Braking control system for electric vehicle - utilises two periods to carry out regenerative braking process, recharging energy and braking force being controlled individually

Patent Assignee: HONDA GIKEN KOGYO KK (HOND); HONDA MOTOR CO LTD (HOND)

Inventor: FUJII T; HONDA S; MOTODATE S; NAKAZAWA Y; SASAKI S; TAMAKI K;

TORIYAMA M

Number of Countries: 006 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 508367	A2	19921014	EP 92105981	A	19920407	199242 B
JP 4312301	A	19921104	JP 91105098	A	19910411	199251
EP 508367	A3	19930331	EP 92105981	A	19920407	199350
US 5384522	A	19950124	US 92866339	A	19920409	199510
US 5644202	A	19970701	US 92866339	A	19920409	199732
			US 94292193	A	19940818	
			US 96592601	A	19960126	
EP 508367	B1	19970827	EP 92105981	A	19920407	199739
			EP 95104972	A	19920407	
			EP 95104980	A	19920407	
DE 69221760	E	19971002	DE 621760	A	19920407	199745
			EP 92105981	A	19920407	
JP 3155313	B2	20010409	JP 91299562	A	19911021	200122
JP 3160308	B2	20010425	JP 91105098	A	19910411	200126

Priority Applications (No Type Date): JP 91299562 A 19911021; JP 91103324 A 19910409; JP 91105098 A 19910411

Cited Patents: No-SR.Pub; EP 311355; EP 457594; GB 2159011; GB 2201309; US 4401926; US 4544868; EP 251916

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 508367	A2	E	43	B60L-007/10	
				Designated States (Regional):	DE FR GB IT
JP 4312301	A		7	B60L-003/00	
EP 508367	A3			B60L-007/10	
US 5384522	A		38	H02P-003/00	
US 5644202	A		37	H02K-007/10	Div ex application US 92866339 Cont of application US 94292193 Div ex patent US 5384522
EP 508367	B1	E	44	B60L-007/10	Related to application EP 95104972 Related to application EP 95104980 Related to patent EP 663312 Related to patent EP 663313
				Designated States (Regional):	DE FR GB IT
DE 69221760	E			B60L-007/10	Based on patent EP 508367
JP 3155313	B2		20	B60L-007/16	Previous Publ. patent JP 5176404
JP 3160308	B2		7	B60L-003/00	Previous Publ. patent JP 4312301

Abstract (Basic): EP 508367 A

The control system includes a braking period unit for establishing a braking period starting and ending within a half of a period of an AC *voltage*** generated in the *coils*** of the electric motor. The regenerative unit for directing an induced current corresponding to energy accumulated in the *coils*** at the end of the braking period to the battery. The energy consuming unit consumes energy generated during the braking period.

The braking period is shortened gradually with an increase in motor speed of the electric motor until the motor reaches a predetermined value, and the braking period is *lengthened*** gradually with an increase in motor speed after the motor speed has exceeded the predetermined value.

ADVANTAGE - When malfunction is detected electric brake brakes drive motor providing satisfactory control of vehicle.

Dwg.5/38

Abstract (Equivalent): EP 508367 B

Braking control system for an electric vehicle comprising: an electric motor (M) with at least one *coil*** (U,V,W) for

driving the vehicle when the vehicle is to be accelerated and for braking the vehicle when the vehicle is to be decelerated, a battery (BA) for providing electrical energy for driving the electric motor (M), braking period setting means (90b) for setting at least one braking period (theta 1, theta 2, theta 3) having a starting time and an ending time, both within a half of a period of an AC *voltage*** generated in the *coil*** (U,V,W) of the electric motor (M) when the vehicle is being braked by the electric motor (M), braking means (U,V,W; UTr1, VTr1, WTr1; UTr2, VTr2, WTr2; UD1, VD1, WD1; UD2, VD2, WD2) for braking the vehicle by consuming energy generated in the *coil*** (U,V,W) during the braking period (theta 1, theta 2, theta 3), regenerative means (90) for directing energy accumulated in the *coil*** (U,V,W) at the end of the braking period (theta 1, theta 2, theta 3) to the battery (BA), characterised in that the braking period setting means (90b) determines the duration of at least one of said at least one braking period (theta 1, theta 2, theta 3) according to a required braking force, and the braking period setting means (90b) determines the ending time of at least one of said at least one braking period (theta 1, theta 2, theta 3) according to a required recharging energy.

Dwg.1/38

Abstract (Equivalent): US 5644202 A

A controller for an electric vehicle driven by an electric motor, a speed of which is controlled according to a *voltage***, said controller comprising:

an accelerator position sensor for sensing an angular position of an accelerator, said angular position being used for determining a *voltage*** to be supplied to the electric motor;

monitor means for monitoring functions of the electric vehicle to detect a malfunction therein, said functions including battery *voltage***, electric motor temperature, electric motor angular position, and accelerator angular position;

braking duty factor determining means for receiving an accelerator angular position input signal from said monitor means when the malfunction is detected by said monitor means, said braking duty factor determining means calculating a braking duty factor according to said accelerator angular position input signal; and

correcting means for receiving said braking duty factor and generating a corrected *voltage*** according to said braking duty factor by gradually decreasing the *voltage*** supplied to the electric motor when the malfunction is detected by said monitor means;

said correcting means supplying said corrected *voltage*** to the electric motor when the malfunction is detected.

Dwg.1/38

US 5384522 A

The regenerative braking control for an electric vehicle having an electric motor with *coils*** and a *battery*** comprises braking period setter for setting a braking period. The braking period starts and ends within a half of a period of an AC *voltage*** generated in the *coils*** of the electric motor when a speed of the electric vehicle is decreasing. A regenerator directs an induced current corresponding to energy accumulated in the *coils*** at the end of the braking period to the battery.

A brake brakes the electric vehicle by consuming energy generated during the braking period.

USE/ADVANTAGE - This electrical braking after the detection of a malfunction in the electrical system provides satisfactory controllability of the electric vehicle.

Dwg.2/28

Title Terms: BRAKE; CONTROL; SYSTEM; ELECTRIC; VEHICLE; UTILISE; TWO; PERIOD; CARRY; REGENERATE; BRAKE; PROCESS; RECHARGE; ENERGY; BRAKE; FORCE ; CONTROL; INDIVIDUAL

Derwent Class: Q14; X13; X21

International Patent Class (Main): B60L-003/00; B60L-007/10; B60L-007/16; H02K-007/10; H02P-003/00

International Patent Class (Additional): B60L-003/08; B60L-007/00; B60L-007/12; B60L-011/18; H02P-006/02; H02P-006/24

58/7,DE/82 (Item 31 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008919291

WPI Acc No: 1992-046560/199206

*Battery*** ignition system for internal combustion engine - has one lead of capacitor, connected via resistors, to cathode of first extra diodes

Patent Assignee: BORICHEV B G (BORI-I)

Inventor: BORICHEV B G; KURCHENKO A G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1332952	A	19910523	SU 3996531	A	19851227	199206 B

Priority Applications (No Type Date): SU 3996531 A 19851227

Abstract (Basic): SU 1332952 A

The system comprises the single-ended transistor converter (1) consisting of transistor (6), transformer (2) with *three*** *windings*** (3,4,5), resistors (7,8,9), diodes (10,11) and capacitor (12), capacitor (13), shunting winding (5) and potentiometer (14) connected to amplifier (15) input, pulse transformer (20) controlling thyristor (25) operation contact breaker (29), ignition *coil*** (27).

The capacitor (30), resistors (31,32) and diodes (33,34) increase operational speed for switching off the voltage converter (1), by shunting the transistor (6) base via diode (18), when the circuit breaker (29) opens.

USE/ADVANTAGE - In ignition system for internal combustion engines. The *battery*** ignition system has its reliability increased by eliminating the effects of increased frequency of interrupter contacts' commutation. Bul.19/23.5.91.

Dwg.1/1

Title Terms: *BATTERY***; IGNITION; SYSTEM; INTERNAL; COMBUST; ENGINE; ONE; LEAD; CAPACITOR; CONNECT; RESISTOR; CATHODE; FIRST; EXTRA; DIODE

Derwent Class: Q54; X22

International Patent Class (Additional): F02P-003/04

58/7,DE/83 (Item 32 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008866940

WPI Acc No: 1991-370966/199151

Resonance magnetometer with coils and optical excitation - has helium filled *cell*** with *three*** coils connected to multiplexer while average frequency is measured by electronic circuit

Patent Assignee: COMMISSARIAT ENERGIE ATOMIQUE (COMS)

Inventor: BERANGER M; KERNEVEZ N; LEGER J; STOECKEL F; LEGER J M
 Number of Countries: 010 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 462001	A	19911218	EP 91401559	A	19910612	199151 B
NO 9102292	A	19911216				199207
FR 2663431	A	19911220				199210
CA 2044531	A	19911215				199211
US 5245280	A	19930914	US 91712409	A	19910610	199338
EP 462001	B1	19931215	EP 91401559	A	19910612	199350
DE 69100784	E	19940127	DE 600784	A	19910612	199405
			EP 91401559	A	19910612	

Priority Applications (No Type Date): FR 907412 A 19900614

Cited Patents: 2.Jnl.Ref; GB 964027; JP 63191981; US 3284699; US 3443208;
 US 4818707

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 462001	A			
			Designated States (Regional): BE DE GB IT NL SE	
US 5245280	A	12	G01V-003/00	
EP 462001	B1 F	16	G01R-033/26	
			Designated States (Regional): BE DE GB IT NL SE	
DE 69100784	E		G01R-033/26	Based on patent EP 462001

Abstract (Basic): EP 462001 A

The magnetometer includes a helium filled cell 910), a laser (14), a polariser (16) and three coils (20x,y,z) placed about the cell at right angle. The coils are connected to a multiplexer (50) which comprises a pulse generator (52) and three switches that can connect each of the coils in turn to a radio frequency generator.

The resonance frequency of any coil is different from the resonance frequencies of the others and depends on the coil axis orientation relative to the field measured. An average frequency is measured by a circuit that includes a phase comparator, a low-pass filter (62), a voltage controlled oscillator and a frequency meter.

USE/ADVANTAGE - For measuring magnetic fields. Has simple construction being isotropic in frequency and uses increased number of excitation coils.

Dwg.4/11

Abstract (Equivalent): EP 462001 B

Magnetic resonance magnetometer incorporating a cell (10) filled with a substrate (12) having a gyromagnetic ratio gamma and which can have a magnetic resonance phenomenon in the presence of an ambient magnetic field (Bo), the resonance being established at the frequency $F = \gamma B_0$, exciting means for said resonance incorporating a winding (20) wound around the cell (10) and means (21 to 25) for exciting the said winding (20) by a resonance signal and means (26) for measuring the frequency of the resonance signal, said magnetometer being characterised in that the exciting winding (20) comprises *three*** *windings*** (20x,20y,20z) having axes forming a trisect angular trihedron (Ox,Oy,Oz), the magnetometer also having a multiplexer (50) able to sequentially connect each the *three*** *windings*** to the exciting circuit (22) and means (28) for measuring the mean value (Fm) of the three frequencies (Fx,Fy,Fz) of the three resonance signals corresponding to the *three*** *windings*** (20x,20y,20z), the value of the ambient magnetic field (Bo) then being given by $Bo = Fm/\gamma$.

Dwg.1/11

Abstract (Equivalent): US 5245280 A

The magnetic resonance magnetometer includes a cell filled with substance having a gyromagnetic ratio and subjected to an ambient magnetic field producing a magnetic resonance phenomenon at a frequency FBo. The magnetometer also includes an exciting device for producing the resonance which includes a winding wound around the cell and a device for exciting the winding by a resonance signal and a device for measuring the frequency of the resonance signal. The exciting winding includes *three*** separate *windings*** having axes forming a trirectangular trihedron.

The magnetometer also includes a multiplexer for sequentially connecting each of the *three*** separate *windings*** to the device for exciting. The magnetometer measures the mean value Fm of three separate frequencies of three separate resonance signals corresponding to the *three*** *windings***. The value of the ambient magnetic field Bo is determined by $Bo=Fm/\gamma$.

ADVANTAGE - Reduced amplitude anisotropy. Means provide information on orientation of field to be measure in trihedron formed by windings.

d

Dwg.4/11

Title Terms: RESONANCE; MAGNETOMETER; COIL; OPTICAL; EXCITATION; HELIUM; FILLED; CELL; THREE; COIL; CONNECT; MULTIPLEX; AVERAGE; FREQUENCY; MEASURE; ELECTRONIC; CIRCUIT

Derwent Class: S01

International Patent Class (Main): G01R-033/26; G01V-003/00

International Patent Class (Additional): G01R-033/02

58/7,DE/84 (Item 33 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008863339

WPI Acc No: 1991-367364/199150

Three-phase loads current overload and short-circuit protector - includes differential network, pulse transformer and switching elements to provide current network

Patent Assignee: UMANSKII V S (UMAN-I)

Inventor: UMANSKII V S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1621113	A	19910115	SU 4654541	A	19890109	199150 B

Priority Applications (No Type Date): SU 4654541 A 19890109

Abstract (Basic): SU 1621113 A

The protector as based on a Parent Cert., is presented in modified form in order to provide better reliability, by means of limiting switching overvoltages during disconnection of inductive loads and now includes a differential network (12), pulse transformer (13) with primary (14) and three secondary (15,16,17) *windings*** and *three*** switching *cells*** (18-20). These additions and associated wiring connections complete a network for current arising from the self-induction e.m.f. in the power transformer (1) primary.

USE - Radioelectronics equipment power supplies. Bul.2/15.1.91.

(3pp Dwg.No.1/2

Title Terms: THREE-PHASE; LOAD; CURRENT; OVERLOAD; SHORT; CIRCUIT; PROTECT; DIFFERENTIAL; NETWORK; PULSE; TRANSFORMER; SWITCH; ELEMENT; CURRENT; NETWORK

Derwent Class: U24; X13
 International Patent Class (Additional): H02H-003/08

58/7,DE/85 (Item 34 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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008709692

WPI Acc No: 1991-213713/199129

Internal combustion engine *battery*** ignition system - has diode
 between amplifier transistor collector and converter transistor base

Patent Assignee: SINELNIKOV A KH (SINE-I)

Inventor: KURCHENKO A P; SINELNIKOV A K H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1184320	A	19910330	SU 3684557	A	19840103	199129 B

Priority Applications (No Type Date): SU 3684557 A 19840103

Abstract (Basic): SU 1184320 A

Ignition system consists of single cycle transistor converter (1) with the transformer (2) having *three*** *windings*** (3-5). The windings are used as feedback, collector and output units. Other components of the system include transistor (6) resistors (7,8,9), diodes (10,11) and capacitor (12) as well as the charge capacitor (13), thyristor (14), resistive divider (15) amplifier (16), diodes (19,20,21), pulse transformer (22) with the two windings (23,24), resistor (25), excitation *coil*** (26) and the points (29).

When the voltage is supplied to the system the voltage converter (1) begins to operate. The negative feedback from the resistive divider (7,8,9) is fed to the transistor (6) base. A negative voltage is produced in the transformer winding (3) and is fed to the transistor (6) base via the diode (10) and the resistor (8).

USE/ADVANTAGE - Used in internal combustion engine ignition systems. Its reliability is increased due to the reduction of reverse voltages. Bul.12/30.3.91 (3pp Dwg.No.1/1

Title Terms: INTERNAL; COMBUST; ENGINE; *BATTERY***; IGNITION; SYSTEM; DIODE; AMPLIFY; TRANSISTOR; COLLECT; CONVERTER; TRANSISTOR; BASE

Derwent Class: Q54; X22

International Patent Class (Additional): F02P-003/04

58/7,DE/86 (Item 35 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008627212

WPI Acc No: 1991-131242/199118

*Multi***-cell*** voltage converter - has two capacitors in transformer unit and input circuit formed by primary windings

Patent Assignee: TOMSK AUT CONT SYST (TOAU-R)

Inventor: MUZYCHENKO N M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1571731	A	19900615	SU 4447575	A	19880425	199118 B

Priority Applications (No Type Date): SU 4447575 A 19880425

Abstract (Basic): SU 1571731 A

Voltage converter comprises a transformer unit (1), whose input circuit (2,3) is connected to the supply circuit rails (5,6) through the commutator (4) and the output circuit (7-10), to the load circuit. Two capacitors (11,12) are introduced in the transformer unit (1). The input circuit - (2,3) is formed by *three*** primary *windings*** (13,14,15) based, e.g. on three transformers (16,17,18) connected in series opposition. The beginnings of winding (14,15) are connected to the first winding (13) beginning through the capacitor (12). The secondary windings (19,20,21) are connected to the load circuit through the diodes (22,23,24) and the capacitive filter (25) - to the resistor (26).

USE/ADVANTAGE - Voltage converter can be used in secondary supply sources. Efficiency is increased and the output voltage ripples and interference level is reduced. Bul.22/15.6.90. (4pp Dwg.No.1/3

Title Terms: MULTI; CELL; VOLTAGE; CONVERTER; TWO; CAPACITOR; TRANSFORMER; UNIT; INPUT; CIRCUIT; FORMING; PRIMARY; WIND

Derwent Class: U24; X12

International Patent Class (Additional): H02M-003/33

58/7,DE/87 (Item 36 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008622374

WPI Acc No: 1991-126404/199118

Vehicle motor switching apparatus - adjusts value of variable resistor to armature *voltage*** adjusting resistance

Patent Assignee: FUJI JUKOGYO KK (FUJH)

Inventor: KYOUKANE Y; NAGANO T

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 424868	A	19910502	EP 90120282	A	19901023	199118	B
US 5165006	A	19921117	US 90601134	A	19901023	199249	
EP 424868	B1	19950201	EP 90120282	A	19901023	199509	
DE 69016573	E	19950316	DE 616573	A	19901023	199516	
			EP 90120282	A	19901023		

Priority Applications (No Type Date): JP 89278186 A 19891024; JP 89279106 A 19891025

Cited Patents: 1.Jnl.Ref; A3...9126; DE 3335923; EP 129319; NoSR.Pub; US 3755724; US 4217529; US 4551659

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 424868	A			Designated States (Regional): DE FR GB	
US 5165006	A	22	H02P-007/12		
EP 424868	B1	E	22 B60L-011/12		
DE 69016573	E		B60L-011/12	Based on patent EP 424868	

Abstract (Basic): EP 424868 A

A first switch connects the shunt *coil*** to the series circuit in parallel to the armature *coil*** to set up the motor as a compound-wound motor when the shunt *coil*** is connected to the series

circuit, while set up as a series motor as soon as disconnected from it. A depression amount of an accelerator of the vehicle is detected. A judging device has a depression amount-preset value for judging whether the amount of depression is larger than the preset value or not.

A selector is responsive to the judging device for controlling the switch to set up the motor as a series motor when the depression amount is larger than the preset value and as a compound-wound motor when the former is smaller than the latter.

ADVANTAGE - Obtains best motor characteristics so as to improve vehicle performance. (23pp Dwg.No.3/15

Abstract (Equivalent): EP 424868 B

An electrical drive system comprising a d.c. motor (6) and a battery (5), said motor (6) being mounted on a vehicle for driving said vehicle with electric power supplied from said battery, a motor control circuit (60e) for controlling said motor, an accelerator (52) for said vehicle and accelerator depression sensing means (12) for sensing the amount of accelerator depression, said motor (6) including an armature *coil*** (6a) connected to said *battery***, a shunt *coil*** (6b) connected to said *battery*** in *parallel*** to said armature *coil*** and a series *coil*** (6c) connected to said *battery*** in *series*** to said armature *coil***, said motor control circuit (60e) including first switching means (SW4; SW10) connected in series with said shunt *coil***, characterised by second switching means (SW6; SW30) connected in parallel to said series *coil*** (6c), and motor-type selection means (32; 380) for selecting, according to travelling conditions, one of a shunt motor mode by turning both switches on, a series motor mode by turning both switches on, a series motor mode by turning both switches off, and a compound-wound motor mode by turning the first switch on and the second switch off.

(Dwg.1/12

Abstract (Equivalent): US 5165006 A

The vehicle motor switching circuit has an armature *coil***, a series circuit including a series *coil*** and connecting the armature *coil*** and a *battery*** and a shunt *coil***, comprising a switch for connecting the shunt *coil*** to the series circuit in parallel to the armature *coil*** to set up the motor as a compound-wound motor when the shunt *coil*** is connected to the series circuit, while set up the motor as a series motor when disconnected.

The appts. further comprises a switch for disconnecting the series *coil*** from the series circuit to set up the motor as a shunt motor when the shunt *coil*** is connected to the series circuit and the series circuit is disconnected.

ADVANTAGE - Obtains best motor characteristics according to driving conditions.

Dwg.10/15

Title Terms: VEHICLE; MOTOR; SWITCH; APPARATUS; ADJUST; VALUE; VARIABLE; RESISTOR; ARMATURE; *VOLTAGE***; ADJUST; RESISTANCE

Derwent Class: Q14; X13; X21

International Patent Class (Main): B60L-011/12; H02P-007/12

International Patent Class (Additional): B60L-011/18; H02P-005/00; H02P-007/298

58/7,DE/88 (Item 37 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008568381

WPI Acc No: 1991-072416/199110

Electromagnetic body treatment device for non-invasive surgery - induces, electrical current and voltage in living tissue, and includes applying symmetrical signal of low intensity and frequency

Patent Assignee: RES FOUND STATE UNI (UYNY-N)

Inventor: MCLEOD K J; RUBIN C T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4993413	A	19910219	US 88247965	A	19880922	199110 B

Priority Applications (No Type Date): US 88247965 A 19880922

Abstract (Basic): US 4993413 A

The method for inducing, by a time-varying magnetic field, an electrical current and voltage in living tissue, and in particular bone tissue, includes applying a symmetrical signal of low intensity and low frequency to the tissues being treated. The frequency of the induced signal is between about 1 Hertz and 1 K Hertz, and is optimally set at 15 Hertz. The peak intensity of the signal corresponds to a peak value of the inducing time-varying magnetic field of between 0.5 millitesla per second and 5 Tesla per second, and for a 15 Hertz signal optimally corresponds to a value of 2.5 millitesla per second.

A device for inducing such a signal in a limb of a person being treated includes a portable power supply in the form of a *battery***, a portable signal generator connected to the *battery*** and a multiconductor ribbon cable connected to the signal generator. The multi-conductor ribbon cable has a female connector on one end and a male connector on another end. The female and male connectors are coupled together but are offset laterally from each other to provide at least one free pin on the male connector and at least one free plug on the female connector, so that the multi-conductor ribbon cable defines a single conductor treatment *coil*** of *multiple*** *turns***. The free pin and the free plug are connected to the signal output terminals of the signal generator.

ADVANTAGE - Prevents osteoporosis and to enhance new bone formation. (9pp Dwg.No.4/5

Title Terms: ELECTROMAGNET; BODY; TREAT; DEVICE; NON; INVADE; SURGICAL; INDUCE; ELECTRIC; CURRENT; VOLTAGE; LIVE; TISSUE; APPLY; SYMMETRICAL; SIGNAL; LOW; INTENSITY; FREQUENCY

Derwent Class: P34; S05

International Patent Class (Additional): A61N-001/00

58/7,DE/89 (Item 38 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008403525

WPI Acc No: 1990-290526/199038

Lead-acid *battery*** construction and mfr. - has flat separators between tapered positive and negative grids with paths for gas and acid flow

Patent Assignee: CALTEC INT INC (CALT-N)

Inventor: FORRER L L; WHEADON E G

Number of Countries: 032 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9010314	A	19900907			199038	B
CA 2010766	A	19900824			199045	
AU 9051899	A	19900926			199050	

US 4982482	A	19910108	US 89315722	A	19890224	199105
US 4998340	A	19910312	US 90534864	A	19900608	199113
US 5044067	A	19910903	US 90581599	A	19900912	199138
EP 460073	A	19911211	EP 90904158	A	19900222	199150
US 5079111	A	19920107	US 90535108	A	19900608	199205
US 5276960	A	19940111	US 89315722	A	19890224	199403
			US 90535108	A	19900608	
			US 91654729	A	19910315	
WO 9010314	A3	19901213	WO 90US1033	A	19900222	199507
EP 460073	B1	19950503	EP 90904158	A	19900222	199522
			WO 90US1033	A	19900222	

Priority Applications (No Type Date): US 89315722 A 19890224; US 90534864 A 19900608; US 90581599 A 19900912; US 90535108 A 19900608; US 91654729 A 19910315

Cited Patents: No.SR.Pub; NoSR.Pub; 5.Jnl.Ref; DD 234128; FR 1407547; FR 2208199; FR 2254886; FR 2346865; FR 2466870; FR 382528; GB 2151392; GB 455308; GB 618716; JP 57180074; JP 58046576; JP 60167262; JP 62170151; JP 63124365; US 1403394; US 4342342

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9010314 A

Designated States (National): AU BB BG BR CA DK FI HU JP KP KR LK MC MG MW NO RO SD SU

Designated States (Regional): AT BE CH DE DK ES FR GB IT LU NL OA SE

EP 460073 A

Designated States (Regional): ES FR GB IT

US 5276960 A 19 H01M-004/70 Div ex application US 89315722

Div ex application US 90535108

Div ex patent US 4982482

Div ex patent US 5079111

EP 460073 B1 E 33 H01M-004/73 Based on patent WO 9010314

Designated States (Regional): DK ES FR GB IT

Abstract (Basic): WO 9010314 A

The improved mfg. process makes a continuous tapered grid strip (6) with a lug strip along the wider edge in conventional equipment (2). *Coiling*** (8, 10, 12), aging, uncoiling (20) and pasting according to intended polarity follow. The strip (6) goes between profiling rollers which overpaste and groove.

The strip (6) is *coiled***, cured in improved appts. and uncoiled. Grids of different widths may be punched from the strip and lugs left attached by removing unwanted portions of the lug strip.

USE/ADVANTAGE - Lighter and more efficient *batteries*** for automobile. Uses less labour-intensive methods.

Dwg.1B/30

Abstract (Equivalent): EP 460073 B

A *coil*** (76) of pasted *battery*** plate stock having a plurality of *wraps*** of pasted *battery*** plate strip (50) comprising a *battery*** grid strip (6) including a reticulated grid strip portion (134), a lug strip portion (132) on one said of said reticulated grid strip portion and a border strip portion (136) adjacent to said reticulated grid strip portion (134) on an opposite side of said reticulated grid strip portion from said lug strip portion and a *battery*** paste layer (30) disposed on said reticulated grid strip portion, characterised in that a space (293) is maintained between adjacent wraps (294) of said pasted *battery*** stock plate.

Dwg.1a/30

Abstract (Equivalent): US 5079111 A

A *battery*** grid is passed with a *battery*** paste so that a profiled and tapered *battery*** plate is formed. This plate is wrapped onto a *coil*** and cured in curing apparatus. A *battery*** element is formed using *coils*** of the finished plate stock, separator material, and winged end plate. After this, several *battery*** elements are then placed into a *battery*** container. The *battery*** paste layer having a profiled surface, has at least one groove which is disposed at an angle of greater than about 45 deg. and less than 90 deg.C relative to the border strip portion on either side of a plane perpendicular to the strip portion. The profiled surface has a region of reduced width which is oriented *parallel*** to the border strip portion and which meets at least some of the grooves. ADVANTAGE - Enables prodn. of lightweight and higher quality lead-acid *battery***.

(29pp)

US 5044067 A

The apparatus for fabricating a *battery*** element has a device means for supplying positive *battery*** plate stock, negative *battery*** plate stock and separator stock. An index advances the positive *battery*** plate stock. The negative *battery*** plate stock and the separator stock are indexed to a set position with the separator stock interposed between adjacent stocks of negative *battery*** plate and positive *battery*** plate. A cutting device simultaneously severs adjacent portions of the positive *battery*** plate stock. The negative *battery*** plate stock and the separator stock create positive *battery*** plates, negative *battery*** plates and separators. USE - For lead acid *battery***. (28pp)

US 4998340 A

A process for producing a *battery*** element having at least one positive *battery*** plate, at least one negative *battery*** plate, and at least one interposed separator for a lead acid *battery*** comprises the steps of providing an elementiser and feeding predetermined *lengths*** of material from *coils*** of positive *battery*** plate stock, negative *battery*** plate stock, and separator stock to the elementiser with the separator stock being interposed between adjacent stocks of negative *battery*** plate and positive *battery*** plate. The materials are indexed to establish adjacent coextensive portions of the materials, and the portions of the materials are cut to establish the *battery*** element having individual negative and positive *battery*** plates with interposed separators. The separator stock is fed such that the leading edge of the separator stock projects beyond the leading edges of the positive and negative *battery*** plate stock. ADVANTAGE - Efficient, economical and highly automated. (29pp)

US 4982482 A

The manufacture of lead-acid batteries involves providing a *battery*** grid and pasting the grid with a *battery*** paste such that a profiled and tapered *battery*** plate is formed.

This *battery*** plate is *wrapped*** onto a *coil*** and cured in curing apparatus. A *battery*** element is formed using *coils*** of the finished plate stock, separator material, and winged end plate.

After this, several *battery*** elements are then placed into a *battery*** container. USE/ADVANTAGE - For automotive starting traction, industrial, and small sealed lead-acid *battery*** applications. More efficient, economical and automated method.

(29pp)

Title Terms: LEAD; ACID; *BATTERY***; CONSTRUCTION; MANUFACTURE; FLAT; SEPARATE; TAPER; POSITIVE; NEGATIVE; GRID; PATH; GAS; ACID; FLOW

Derwent Class: P56; X16; X22

International Patent Class (Main): H01M-004/70; H01M-004/73

International Patent Class (Additional): B23P-019/00; H01M-002/02;
H01M-004/20; H01M-004/21; H01M-004/82; H01M-010/12

58/7, DE/90 (Item 39 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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008353916

WPI Acc No: 1990-240917/199032

High voltage supply for X-ray tube - includes transformer with capacitors embedded in *cells*** formed in *secondary*** winding

Patent Assignee: GENERAL ELECTRIC CGR SA (CGRR)

Inventor: JEDLITSCHKA H; SIREUL J; JEDLITSCHK H; SIREUP J

Number of Countries: 008 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 381580	A	19900808	EP 90400257	A	19900130	199032 B
FR 2643534	A	19900824				199041
JP 2234399	A	19900917	JP 9024277	A	19900202	199043
US 5003452	A	19910326	US 90471593	A	19900129	199115
EP 381580	B1	19931027	EP 90400257	A	19900130	199343
DE 69004112	E	19931202	DE 604112 EP 90400257	A	19900130	199349
				A	19900130	

Priority Applications (No Type Date): FR 891357 A 19890202

Cited Patents: DE 3125240; EP 3946; FR 2239040; FR 2445087; US 3510748; US 3541424; US 4338657

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 381580 A

Designated States (Regional): DE ES FR GB IT NL

EP 381580 B1 F 13 H05G-001/10

Designated States (Regional): DE ES FR GB IT NL

DE 69004112 E H05G-001/10 Based on patent EP 381580

Abstract (Basic): EP 381580 A

The electrical supply system for an x-ray tube includes primary and secondary windings (12,13) of a transformer formed as circular *coils*** which are encased in two half-shells (20,21). The half-shells form an annular structure with a *series*** of holes (A1,A2,..A24).

The holes are intended to receive capacitors (C1). The output terminals of the secondary windings are situated laterally so as to be connected to the short sides of the capacitors and to the diodes. The diodes and capacitors form a rectifier and voltage doubler to supply the tube.

ADVANTAGE - Compact and easily assembled. (13pp Dwg.No.3/7

Abstract (Equivalent): EP 381580 B

High voltage supply device for an X-ray tube, comprising a transformer which has at least one primary winding (12) and a *plurality*** of secondary *windings*** (S1 to S12), the two output terminals (B1 to B24) of each of the said secondary windings being connected to a voltage doubler-rectifier circuit which is formed by two diodes (D1 to D24) and two filter capacitors (C1 to C24), the said doubler-rectifier circuits being connected together so that their output voltages add up, characterised in that the primary winding (12) and the secondary windings (S1 to S12) of the transformer are produced on concentric *coils***, in that the output terminals (B1 to B24) of the said secondary windings are distributed over each lateral side of

the said concentric *coils***, in that the capacitors (C1 to C24) are arranged on the outer periphery of the concentric *coils***, and in that the diodes are arranged on a lateral side of the said concentric *coils***.

Dwg.1/7

Abstract (Equivalent): US 5003452 A

The high-voltage supply device has a transformer which has a primary winding and a number of secondary windings. The two output terminals of each secondary winding are connected to a voltage-doubling rectifier circuit constituted by two diodes and two filter capacitors. The voltage-doubling rectifier circuits are connected to each other so that their output voltages are added. The primary and secondary windings of the transformer are wound on concentric *coil*** forms. The output terminals of the secondary windings are distributed on each lateral side of the concentric *coil*** forms. The capacitors are placed on the outer periphery of the concentric *coil*** forms. The diodes are placed on one lateral side of the concentric *coil*** forms.

The capacitors are placed within an insulating dielectric structure of annular *cylindrical*** shape which surrounds the concentric *coil*** forms of the transformer and serves as a support for the capacitors, concentric *coil*** forms and diodes.

USE - For X-ray tube

Title Terms: HIGH; VOLTAGE; SUPPLY; X-RAY; TUBE; TRANSFORMER; CAPACITOR; EMBED; CELL; FORMING; SECONDARY; WIND

Derwent Class: V05

International Patent Class (Main): H05G-001/10

International Patent Class (Additional): H01F-015/02; H01G-004/40; H02M-007/10

58/7,DE/91 (Item 40 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008122005

WPI Acc No: 1990-009006/199002

Charging and discharging battery and power source appts - storing energy from one *battery*** bank in *coil*** and transferring to second bank by transistor control until fully discharged

Patent Assignee: TOYOTA JIDOSHA KK (TOYT)

Inventor: GOTO K

Number of Countries: 006 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 348983	A	19900103	EP 89111880	A	19890629	199002	B
JP 2015580	A	19900119	JP 88164167	A	19880701	199009	
US 5177425	A	19930105	US 89372601	A	19890628	199304	
EP 348983	B1	19940831	EP 89111880	A	19890629	199433	
DE 68917810	E	19941006	DE 617810	A	19890629	199439	
			EP 89111880	A	19890629		

Priority Applications (No Type Date): JP 88164167 A 19880701

Cited Patents: A3...9104; DE 3317531; EP 135056; No-SR.Pub

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 348983 A E 18

Designated States (Regional): AT DE FR GB

US 5177425 A 18 H02J-007/00

EP 348983 B1 E 24 H01M-010/44
 Designated States (Regional): AT DE FR GB
 DE 68917810 E H01M-010/44 Based on patent EP 348983

Abstract (Basic): EP 348983 A

The charging appts. comprises a number of electrochemical cells connected together in *series*** to form *battery*** blocks (18, 20) which are similarly connected to form a battery. The two blocks are charged from an external charger through the contactors (14, 16) switched to positions A and D. On load one block is connected through the converter and transistor (28) is switched by a square wave connecting a booster *coil*** (36) across the block not in use storing energy which at the end of the cycle is transferred, until it is discharged, via a diode (30) to the block under load.

USE/ADVANTAGE - Electric vehicle battery charging appts. All blocks of battery can be given full discharge to equalize electrodes on or off load.

2/12

Abstract (Equivalent): EP 348983 B

A method of charging and discharging a battery having a plurality of electrochemical cells which dissolve an active material from electrodes into electrolyte in the discharging process and deposit said active material on the surfaces of said electrodes in the charging process, comprising the steps of preparing a battery composed of a plurality of battery blocks (18, 20) each of which is composed of a plurality of said electrochemical cells connected in series to each other, and applying cycles of full discharge to any given battery block (18, 20) among said plurality of battery blocks (18, 20) so that all of said battery blocks (18, 20) subsequently experience at least one of said cycles of full discharge, being characterised by raising the output *voltage*** of said given battery block (18, 20) by using a booster means (25, 36) being connected to said given battery block (18, 20) among said plurality of blocks (18, 20) when transferring the charges of the respective battery block to at least one of the other battery blocks (18, 20), connecting the output side of said booster means (25, 36) to at least one of the other battery blocks (18, 20), thereby forming a charge transfer passage (30, 32, 34), and controlling the boosting operation of said booster means (25, 36) and the transfer of charges through said charge transfer passage (30, 32, 34) by a control circuit (40), thereby performing for each of said battery blocks (18, 20) at least one of said cycles of full discharge within a predetermined period of time.

Dwg.1/12

Abstract (Equivalent): US 5177425 A

The charging/discharging method comprises a step of preparing the battery by preparing a number of battery blocks each of which is composed of a number of the electrochemical cells connected in series with each other. A step of fully discharging any one battery block is performed by transferring the charges of one battery block to at least one other battery blocks through a booster. The last step is repeated so that all of the battery blocks subsequently experience at least one cycle of full discharge within a predetermined period of time. USE - For charging and discharging battery having electrochemical cells which dissolve active material from electrodes into electrolyte in discharging process and deposit active material on surface of electrodes in charging process. (Dwg.1/12)

Title Terms: CHARGE; DISCHARGE; BATTERY; POWER; SOURCE; APPARATUS; STORAGE; ENERGY; ONE; BATTERY; BANK; *COIL***; TRANSFER; SECOND; BANK; TRANSISTOR; CONTROL; DISCHARGE

Derwent Class: X16; X21
 International Patent Class (Main): H01M-010/44; H02J-007/00

58/7,DE/92 (Item 41 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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008051770

WPI Acc No: 1989-316882/198944

Vibration filler for fibre-structure electrode - has pivoted plate
 extending into chamber contg. active mass for electrodes of galvanic cell
 Patent Assignee: DEUT AUTOMOBILGES MBH (DEAU)

Inventor: IMHOLF O; IMHOF O

Number of Countries: 007 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3822209	C	19891102	DE 3822209	A	19880701	198944 B
EP 348712	A	19900103	EP 89110444	A	19890609	199002
JP 2054867	A	19900223	JP 89167202	A	19890630	199014
US 5069258	A	19911203	US 90604337	A	19901026	199151
EP 348712	B1	19930203	EP 89110444	A	19890609	199305
DE 58903433	G	19930318	DE 503433	A	19890609	199312
			EP 89110444	A	19890609	
ES 2039755	T3	19931001	EP 89110444	A	19890609	199344

Priority Applications (No Type Date): DE 3822209 A 19880701

Cited Patents: 2.Jnl.Ref; CH 491512; JP 55139763; JP 62024559

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 3822209 C 4

EP 348712 A G

Designated States (Regional): DE ES FR GB SE

EP 348712 B1 G 5 H01M-004/04

Designated States (Regional): DE ES FR GB SE

DE 58903433 G H01M-004/04 Based on patent EP 348712

ES 2039755 T3 H01M-004/04 Based on patent EP 348712

Abstract (Basic): DE 3822209 C

The porous battery plate (4) is suspended in the active material contained in a tank (1). The plate is held by its terminal connector (5). *Parallel*** to the *battery*** plate is an oscillator plate (3) connected to a vibrator (8, 9). This can be an oscillating armature motor or similar drive. It typically vibrates the plate (3) at between 30 Hz and 100Hz, with the movement being at right angles to the *length*** of the battery plate (4).

The parallel displacement of the oscillator plate from the battery plate is between 2 mm and 50 mm, and the clearance of the oscillator plate from the bottom of the tank is at least 1 mm. The dimensions of the oscillator plate do not differ by more than 20 per cent from those of the electrode plate.

USE/ADVANTAGE - Vibration filling of porous electrode plate of galvanic battery. Simple vibrator system which can fill battery plates up to largest size.

1/1

Abstract (Equivalent): EP 348712 B

Device for vibration filling of porous fibre structure electrode frames for *voltaic*** cells, having a filling chamber contg. the active cpd. and a vibrating plate, the principal surface of which is

parallel to the principal surface of a porous electrode frame situated in the paste, characterised in that a suitable holder is additionally provided for the vertical arrangement of the electrode frame in the filling chamber, in that the vibrating plate is likewise arranged with its principal extension vertical within the filling chamber, and in that the distance of the vibrating plate from the electrode frame, which is arranged parallel, is 2 to 50 mm and the distance of the vibrating plate from the base of the filling chamber is at least 1 mm. (Dwg.1/1)

Abstract (Equivalent): US 5069258 A

The device includes a vibrating plate having a principal extension arranged vertical within a filling chamber. An electrode plaque is arranged with a principal surface parallel to the principal surface of the vibrating plate at a distance of about 2 to 50 mm from the vibrating plate (when swung in to the max. extent). The distance of the vibrating plate from the base of the filling chamber is at least about 1 mm.

It is possible to fill a series of electrode plaques with one charge of the filling chamber, the filling operation for the electrode plaque proceeding very rapidly and with considerably less noise than known devices, in which the entire filling vessel is vibrated.

USE - For vibration filling of porous fibre structure electrode plaques for *voltaic*** cells. (5pp)2

Title Terms: VIBRATION; FILL; FIBRE; STRUCTURE; ELECTRODE; PIVOT; PLATE; EXTEND; CHAMBER; CONTAIN; ACTIVE; MASS; ELECTRODE; GALVANIC; CELL

Derwent Class: P43; X16

International Patent Class (Main): H01M-004/04

International Patent Class (Additional): B06B-001/00; H01M-004/26; H01M-004/28

58/7,DE/93 (Item 42 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007667830

WPI Acc No: 1988-301762/198843

Motor vehicle starter solenoid with progressive action - has triple windings successively energised by timer until contactor closes, when all but holding *coil*** de-energise

Patent Assignee: MITSUBISHI DENKI KK (MITQ)

Inventor: YAMAMOTO K

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2611981	A	19880909	FR 882320	A	19880225	198843 B
US 4873607	A	19891010	US 88159717	A	19880224	198950

Priority Applications (No Type Date): JP 8741848 A 19870225

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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FR 2611981	A	25			
US 4873607	A	12			

Abstract (Basic): FR 2611981 A

A contactor (33) is connected between the vehicle's *battery*** (31) and starter motor (32). The contactor's solenoid has *three*** separate *windings*** (33f,g,h), all connected to the *battery*** and earthed via individual control transistors (36a,b,c).

When the vehicle's starter switch (34) is operated, a supply is fed to a timer unit (37) which delivers a turn-on signal to one transistor (36a). This energises its winding (33f) and the contactor starts to close, the second and third transistors and their windings being switched in by the timer as contactor spring (33e) resistance increases. When an indicator (38) shows the contactor is closed, the latter windings are switched out, leaving only the first energised to provide a holding force.

AVANTAGE - Progressive action produced by *three*** *windings*** compensates for non-linearity of solenoid operation and varying spring forces, so eliminating shocks. Partic. applicable to pre-engaged pinion units.

5/8

Abstract (Equivalent): US 4873607 A

The control device (37) comprises timers (37a and 37b) and base resistors (R).

The timer in response to the turn on operation of the switch (34) provides an output after a predetermined delay for example 10 milliseconds after the closure of the switch to supply a base current for the transistor (36b) through the resistor R.

Also, the timer provides an output after a predetermined delay, for example 20 milliseconds after the turn-on operation of the switch to cause the transistor to turn on.

The timers are deenergised when the line (38) signals the closure of the contacts (33a, 33b and 33c). Thus, when the switch is closed, the transistor 36a is first turned on to excite the *coil*** (33) and then the *coils*** (33g and 33h) are sequentially excited.

After the switch is closed, the *coils*** are deenergised and only the *coil*** is kept excited. (12pp Dwg.No.5/9)

Title Terms: MOTOR; VEHICLE; START; SOLENOID; PROGRESS; ACTION; TRIPLE; WIND; SUCCESSION; ENERGISE; TIME; CONTACT; CLOSE; HOLD; *COIL***; DE; ENERGISE

Derwent Class: Q54; V02; V03; X22

International Patent Class (Additional): F02N-011/08; H01F-007/18; H01H-047/04

58/7,DE/94 (Item 43 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007359390

WPI Acc No: 1987-356396/198751

Current generating system for AC generator in vehicle - has delta winding and full wave rectifier bridge with two-pole on-off switch selecting supply mode

Patent Assignee: LIND H (LIND-I); VAN DER LINDE H S (VDLI-I)

Inventor: LINDE H S

Number of Countries: 006 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3719376	A	19871217	DE 3719376	A	19870610	198751 B
GB 2193395	A	19880203	GB 8713561	A	19870610	198805
ZA 8704089	A	19871117				198805
AU 8774054	A	19871217				198806
JP 63052645	A	19880305	JP 87145020	A	19870610	198815
US 4868480	A	19890919	US 8768330	A	19870609	198947
GB 2193395	B	19900613				199024

Priority Applications (No Type Date): ZA 864314 A 19860610

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3719376	A		6		
US 4868480	A		5		

Abstract (Basic): DE 3719376 A

The current generating system has a two-pole on/off switch. The first pole is connected in the closed state of the switch for voltage-controlled shunt excitation of the ac generator in order to supply the vehicle and in the open state for *battery*** excitation (where the voltage control for the ac generator supply is put out of action).

The second pole of the switch in the closed state connects a single-pole relay *coil*** between the delta circuit and earth. A charging warning lamp is normally connected via closed contacts belonging to the relay between *battery*** and earth.

ADVANTAGE - Handles various electrical equipment, especially high powered devices.

1/2

Abstract (Equivalent): GB 2193395 B

A power system for a motor vehicle having a *battery***, a charge warning light connected to come on when the *battery*** is not being charged, and an alternator having *three***-phase *windings*** connected in delta connection, a field *coil***, and a voltage regulator, the power system comprising a full wave rectifying bridge, connected to the alternator windings which feed the bridge, a first plug means connected to the bridge for providing a power supply for welding equipment, a second plug means connected to the alternator windings for providing a power supply for high voltage appliances, a step-up transformer rectifier means connected to the second plug means, means for causing the *battery*** to remain permanently connected under running conditions with the field *coil*** and voltage regulator, a single pole normally closed relay having a *coil***, and a double pole single throw switch, a first pole of the switch closing for connecting normal shunt excitation with voltage regulation of the alternator for normal supply inside the vehicle and opening for disconnecting normal shunt excitation and connecting only *battery*** excitation, thus effectively disabling the voltage regulation of the alternator output voltage, and a second pole of the switch closing for connecting the *coil*** of the relay between the delta connection and ground, wherein the charge warning light is connected via the normally closed points of the relay between the *battery*** and ground.

Abstract (Equivalent): US 4868480 A

The accessory is delta wound and has a full wave rectifier bridge to provide output selected from normal operation of vehicle electrics, arc welding, fast *battery*** charging and high voltage supply to extraneous appliances.

A double pole single throw switch selects either normal voltage regulated shunt excitation or disables voltage regulation, provides *battery*** excitation and charge warning via a light which indicates not only alternator failure but also supply for welding, fast charging or extraneous appliances.

USE - Motor vehicle alternator. (5pp)A

Title Terms: CURRENT; GENERATE; SYSTEM; AC; GENERATOR; VEHICLE; DELTA; WIND ; FULL; WAVE; RECTIFY; BRIDGE; TWO; POLE; SWITCH; SELECT; SUPPLY; MODE

Derwent Class: P55; Q17; X11; X12; X13; X22

International Patent Class (Additional): B23K-009/10; B60R-016/02; H02H-000/00; H02J-001/00; H02J-003/12; H02J-004/00; H02J-007/14;

H02J-007/16; H02J-009/04; H02J-011/00; H02K-019/34; H02N-000/00;
H02P-009/02

58/7,DE/95 (Item 44 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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007005730

WPI Acc No: 1987-005727/198701

Load-switching voltage converter - has conversion *cells*** each with
*three*** secondary *windings*** and each load connected to
series-connected secondary windings of all cells

Patent Assignee: KHARKOV POLY (KHPO)

Inventor: LOBOIKO S N; MEDVEDEVA T M; TERESHCHEN N D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1229934	A	19860507	SU 3812608	A	19841115	198701 B

Priority Applications (No Type Date): SU 3812608 A 19841115

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 1229934	A		2		

Abstract (Basic): SU 1229934 A

The converter contg. cells with output transformers, a master generator (4) at the input to the cell (5) and the switched loads (1-3), has the additional cells (6-8). Each transformer has as *many*** (N) sec. *windings*** as loads. The prim. supply (9) is connected to a discretely controlled phase shift circuit (10).

Each winding belonging to a definite cell and load is arranged in a concordant connection with the 0-numbered cell winding if in recording the binary number corresp. to the cell number there is an 0-level in the digit place corresp. to the number of the load and opposingly if there is a 1-level. A phase-shift of the output voltage of the corresp. cells by (pi) permits contactless switching of several loads. To switch the voltage from the load (3) to the load (2), the phase shift by (pi) is performed in the corresp. cells (7,8).

USE/ADVANTAGE - As a load-switching voltage converter for automatic control and computing appts., N loads can be switched electronically.

Bul.17/7.5.86 (2pp Dwg.No.1/1

Title Terms: LOAD; SWITCH; VOLTAGE; CONVERTER; CONVERT; CELL; THREE;
SECONDARY; WIND; LOAD; CONNECT; SERIES; CONNECT; SECONDARY; WIND; CELL

Derwent Class: U24; X12

International Patent Class (Additional): H02M-007/53

58/7,DE/96 (Item 45 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004782128

WPI Acc No: 1986-285469/198644

Electrode *coil*** for accumulator *battery*** cells - has inner cavity enlarged by high-capacity electrodes, filled with *tubular*** sleeve for winding *mandrel***

Patent Assignee: VARTA BATTERIE AG (VART)

Inventor: SPRENGEL D; WOIDT J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3514143	A	19861023	DE 3514143	A	19850419	198644 B

Priority Applications (No Type Date): DE 3514143 A 19850419

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3514143	A		4		

Abstract (Basic): DE 3514143 A

The *coil*** consists of a positive and a negative electrode with interspaced separators. It is inserted into a casing cup, whose outer dia. corresponds to standard dimensions of round *battery*** cells. The *coil*** inner cavity is increased by use of electrodes with high vol.-related specific capacity. The cavity is filled by a *tubular*** sleeve (5), whose aperture is dimensioned for retaining of a winding *mandrel*** (4).

Pref. the sleeve wall thickness is at least 2mm with an inner dia. of 5 to 7 mm. The sleeve is typically an injection moulding of a plastics. It may have longitudinal slots (8) for threading of the electrodes. Its inner wall has a protrusion (6) formed in its longitudinal direction, matching a corresponding depression (7) on the winding *mandrel***.

ADVANTAGE - Smaller dimensions of electrodes with fixed mounting in standard cells. (4pp Dwg.No.1/1

Title Terms: ELECTRODE; *COIL***; ACCUMULATOR; *BATTERY***; CELL; INNER; CAVITY; ENLARGE; HIGH; CAPACITY; ELECTRODE; FILLED; TUBE; SLEEVE; WIND; *MANDREL***

Derwent Class: X16

International Patent Class (Additional): H01M-006/10; H01M-010/28

58/7,DE/97 (Item 46 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004598345

WPI Acc No: 1986-101689/198616

Power supply for electroluminescent panels - comprises *battery*** fed oscillator circuit feeding panel through step-up auto-transformer and tunes to virtual shut-down upon fault

Patent Assignee: LUMINESCENT ELECTRONICS INC (LUMI-N)

Inventor: SIMOPOULOS G N; SIMOPOULOS N T

Number of Countries: 010 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 178043	A	19860416			198616	B
BR 8503588	A	19860429			198622	
JP 61088491	A	19860506	JP 85166959	A	19850730	198624
US 4595861	A	19860617	US 84635770	A	19840730	198627
ES 8703709	A	19870501	ES 546955	A	19850913	198724
CA 1237837	A	19880607			198827	
EP 178043	B	19900523			199021	
DE 3577951	G	19900628			199027	

Priority Applications (No Type Date): US 84635770 A 19840730; ES 546955 A 19850913

Cited Patents: EP 58035; FR 2398427; GB 1469035; GB 2113937

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 178043 A E 21

Designated States (Regional): DE FR GB IT SE

EP 178043 B

Designated States (Regional): DE FR GB IT SE

Abstract (Basic): EP 178043 B

The basic power source is a 12 volt *battery*** (14). An oscillator drive circuit (20,21,22,24) is connected to the *battery*** with its frequency depending on the ampere-turns in the primary winding (N1) and the reflected capacitance of the EL panel (10) into the primary winding. When a load, such as the EL panel, is applied between terminal A and ground, using less energy than the energy fed to the base emitter junction, the power supply continues to operate.

If however, the panel (10) becomes shorted or otherwise dissipates excessive energy, then the oscillator circuit is substantially detuned and insufficient energy is fed through the capacitor (21) into the base of the transistor (20) to establish or maintain oscillation.

USE/ADVANTAGE - For display in aircraft and vehicle instrumentation panels. Under partial or complete short circuit of penel supply goes into idling state with very low current input. (21pp Dwg.No.1/3

Abstract (Equivalent): EP 178043 B

A drive circuit for an electroluminescent panel (10) or the like, operating from a low voltage source (14) of DC power and comprising an autotransformer (21) having a *plurality*** of *windings*** (N1,N2,N3;N4) defined by taps along said autotransformer (12), said autotransformer (12) including a voltage step-up winding (N3; N4) for driving connection to said electroluminescent panel (10), said drive circuit further comprising oscillator means (20) connected to said low voltage source (14) and comprising at least one transistor (20;20A,20B) connected to associated windings (N1,N2; N1,N2,N3) of said autotransformer (12), said drive circuit being characterised in that said electroluminescent panel (10) or the like defines a capacitive load and the oscillation of said oscillator means (20) is responsive to the reflected capacitance of said electroluminescent panel (10) such that said oscillator means (20) is detuned by a short circuit of said electroluminescent panel (10) and will no longer oscillate. (7pp)

Abstract (Equivalent): US 4595861 A

The circuit comprises an autotransformer having *several*** *windings*** defined by taps along its *length*** including a *voltage*** step-up winding for driving the connection to the electroluminescent panel. An oscillator is connected to the low voltage source and comprises at least one transistor connected to the autotransformer windings. The oscillation is responsive to the reflected capacitance of the electroluminescent panel de-tuning the oscillator by a short circuit of the panel preventing oscillation.

The autotransformer is driven push/pull by a pair of transistors and is maintained at D.C. ground potential during operation. A feedback winding is coupled to the driver windings and reflects back a reduced amount of the driving voltage to drive at least one transistor.

ADVANTAGE - Transformerless and entirely made up of solid state elements. (8pp

Title Terms: POWER; SUPPLY; ELECTROLUMINESCENT; PANEL; COMPRISE; *BATTERY***; FEED; OSCILLATOR; CIRCUIT; FEED; PANEL; THROUGH; STEP-UP; AUTO; TRANSFORMER; TUNE; VIRTUAL; SHUT; DOWN; FAULT

Derwent Class: P85; U24; W05; W06; X22

International Patent Class (Additional): G09G-003/30; H02H-007/12; H05B-033/08; H05B-037/00; H05B-041/16

58/7,DE/98 (Item 47 from file: 350)
 DIALOG(R) File 350:Derwent WPIX
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004532284

WPI Acc No: 1986-035628/198605

Two-battery power supply system for vehicle - has armature *coil*** for generating three-phase alternating current field *coil*** in opposition to armature *coil***, rectifier and *voltage*** regulator

Patent Assignee: MITSUBISHI DENKI KK (MITQ)

Inventor: IWAKI Y; MATSUMOTO A; YOKOTA M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4564799	A	19860114	US 83495585	A	19830518	198605 B

Priority Applications (No Type Date): JP 8290134 A 19820525; JP 8290132 A 19820525; JP 8290133 A 19820525

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4564799	A		6		

Abstract (Basic): US 4564799 A

The system has a generator including an armature *coil*** for generating a three-phase alternating current, a field *coil*** associated with the armature *coil*** and a rectifier for converting an A.C. output of the armature *coil*** into a direct current. A *voltage*** regulator sets the generated *voltage*** of the armature *coil*** at a constant value by controlling a current flowing through the field *coil***. A *battery*** connected across output terminals of the generator, and a starting motor and an electric load are connected in *parallel*** with the *battery***.

A second battery is connected to the ignition device and provides a power source to the ignition device isolated from the first battery. A device including a power source other than the generator charges the second battery to provide a stable *voltage*** to the ignition device independent of the *voltage*** of the first battery.

ADVANTAGE - Is hardly affected by surge *voltages*** or noise. (6pp
 Dwg. No. 2/3)

Title Terms: TWO; BATTERY; POWER; SUPPLY; SYSTEM; VEHICLE; ARMATURE;
 *COIL***; GENERATE; THREE; PHASE; ALTERNATE; CURRENT; FIELD; *COIL***;
 OPPOSED; ARMATURE; *COIL***; RECTIFY; *VOLTAGE***; REGULATE

Derwent Class: X13; X16; X22

International Patent Class (Additional): H02J-007/00

58/7,DE/99 (Item 48 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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004180719

WPI Acc No: 1985-007599/198502

Vehicle *battery*** charging generator circuit - has regulator with thermistor in protection circuit to prevent damage at higher temp

Patent Assignee: MITSUBISHI DENKI KK (MITQ)

Inventor: IWAKI Y

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3423891	A	19850103	DE 3423891	A	19840628	198502 B
US 4594631	A	19860610	US 84618785	A	19840608	198626
DE 3423891	C	19891012				198941

Priority Applications (No Type Date): JP 83U101881 U 19830628; JP 83U101879 U 19830628; JP 83U101880 U 19830628

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DE 3423891	A	17		

Abstract (Basic): DE 3423891 A

The *three*** phase *windings*** (1) of the generator are connected by a rectifier (4) to the *battery*** (12) and by another output connection (5) to a short circuit section (23) of a control circuit (9). The field winding (2) is connected at one end to this second output connection and to the junction between a diode (D1) and transistor (7) in the control circuit. In the short circuit section is a thermistor (14), and in one circuit variation, the thermistor is in *series*** with a resistance (24).

This circuit has a higher resistance at normal temp. and interrupts flow through the field winding when the temp. rises. Connected to the junction between diode and resistance is another diode (16) in *series*** with a protective transistor (17). A current flow is passed by the bare connection of this transistor when the temp. rises about a certain level to interrupt the current through the field winding.

ADVANTAGE - The generator is protected from damage when the temp exceeds 120 deg.C

Abstract (Equivalent): US 4594631 A

The protective shorting circuit is coupled between a rectifier output terminal supplying the field *coil*** of the generator and the ground terminal. The circuit has a high resistance for normal temperatures and a low resistance for high temperatures, thereby to interrupt the current flow in the field *coil*** when high temperatures occur.

The protective shorting circuit may be implemented with a single thermistor. Alternatively, a protective transistor is coupled to the field *coil***, and base current is supplied to the protective transistor when the temperature rises above a predetermined level to shut off the current flow through the field *coil*** under such conditions.

USE - In motor vehicles. (8pp)c

Title Terms: VEHICLE; *BATTERY***; CHARGE; GENERATOR; CIRCUIT; REGULATE; THERMISTOR; PROTECT; CIRCUIT; PREVENT; DAMAGE; HIGH; TEMPERATURE

Derwent Class: X16; X22

International Patent Class (Additional): H02H-007/06; H02J-007/14

58/7,DE/100 (Item 49 from file: 350)
 DIALOG(R) File 350:Derwent WPIX
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004062945

WPI Acc No: 1984-208486/198434

Dual *voltage*** motor vehicle electrical system - introduces second or cranking *battery*** in *series*** during cranking conditions only
 Patent Assignee: GENERAL MOTORS CORP (GENK)

Inventor: NOWAKOWSKI R J

Number of Countries: 006 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 116213	A	19840822	EP 83307502	A	19831209	198434 B
JP 59139887	A	19840810	JP 842786	A	19840112	198438
US 4492912	A	19850108	US 83457495	A	19830112	198504
CA 1191237	A	19850730				198535
EP 116213	B	19861120				198647
DE 3367829	G	19870108				198702

Priority Applications (No Type Date): US 83457495 A 19830112

Cited Patents: FR 2386177; GB 2015212; US 3671843; US 3868558; US 3993914

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 116213	A	E 25		Designated States (Regional): DE FR GB
EP 116213	B	E		Designated States (Regional): DE FR GB

Abstract (Basic): EP 116213 A

The 12 *volt*** battery (34) which serves to supply ignition and vehicle accessory electrical requirements, is charged by the engine driven AC generator (10), *voltage*** regulator and diode rectifier circuit (16). This battery and the 4 *volt*** cranking battery and switch (40) complete the series circuit to the cranking motor (42) whilst the switch (48) controls energisation of the vehicle accessory loads represented by the resistor (50), from the battery (34) only.

The cranking battery is charged by the circuit (52) inscribed by the dotted line and deriving its power from the battery (34). The control maintains this charging circuit (52) operable for a predetermined *length*** of time after the engine has shut down the charging rate controlled in inverse relationship to the battery (36) *voltage***.

ADVANTAGE - Maintains charge on cranking battery even under short run frequent start conditions.

1/2

Abstract (Equivalent): EP 116213 B

A dual *voltage*** motor vehicle electrical system comprising in combination: first (34) and second (36) *series***-connected *batteries*** for supplying an electrical engine cranking motor (42) with a *voltage*** corresponding to the sum of the *voltages*** of the batteries (34,36) at least one (34) of said batteries being connected to supply at least one other electrical load with a lower *voltage*** corresponding to its terminal *voltage***, a *voltage***-regulated direct *voltage*** generating means (10,16) driven by an engine of the vehicle, and conductor means (32 ground) connecting the output terminals (28,30) of said generating means (10,16) to the terminals of said first battery (34) whereby said first battery (34) is charged by said generating means (10,16), the system including a control means (60,64) having an input (68,80) connected to said conductor means (32 ground) and an output (54,58) connected to the terminals (26,38) of said second battery (36) for charging said second battery (36) from the *voltage*** applied to said conductor means (32 ground), said control means (60,64) including means (82, 111) for varying the charging current supplied to said second battery (36) as a function of the terminal *voltage*** of said second battery (36), characterised by means (100,82,111) for maintaining said control means (60,64) in operation for a predetermined time period following shutdown of said

engine to charge said second battery (36) from said first battery (34) for said time period.

(10pp)

Abstract (Equivalent): US 4492912 A

Series connected cranking and accessory batteries are used to energise an electric vehicle engine cranking motor. The accessory battery is charged by a vehicle engine driven generator and the cranking battery is charged by a battery charging circuit having an input connected to the accessory battery and an output connected to the cranking battery.

The battery charging circuit is maintained in operation for a period of time after shut down of the engine to charge the cranking battery from the accessory battery. The battery charging circuit includes an inductance coil for transferring energy between the accessory and cranking batteries which may take the form of an actuating coil of a magnetic switch, the contacts of which disconnect the accessory battery from an electrical load when the actuating coil is deenergised.

ADVANTAGE - Provides adequate charging current to cranking battery, when battery is only operated for short periods of time between cranking modes.

(7pp)

Title Terms: DUAL; *VOLTAGE***; MOTOR; VEHICLE; ELECTRIC; SYSTEM; INTRODUCING; SECOND; CRANK; BATTERY; SERIES; CRANK; CONDITION

Derwent Class: Q16; Q54; X16; X22

International Patent Class (Additional): B60Q-009/00; F02N-011/08; H02J-007/14; H02P-007/06

58/7,DE/101 (Item 50 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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003957637

WPI Acc No: 1984-103181/198417

Vehicle electric generator and voltage regulator - uses polyphase alternator and electronic charging circuit to regulate *battery*** voltage

Patent Assignee: REGIE NAT USINES RENAULT (RENA)

Inventor: BANON L; HERENT G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2533375	A	19840323	FR 8215999	A	19820922	198417 B

Priority Applications (No Type Date): FR 8215999 A 19820922

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2533375	A	10			

Abstract (Basic): FR 2533375 A

The alternator (1) consists of central stator having *multi*** -phase *coil*** *windings*** and a peripheral rotor having permanent excitation magnets. The windings are connected to a bridge rectifier (2) whose output is connected to capacitor (3) linked with a regulator comprising a chopping circuit (4) whose output is connected to an inductance (5) linked to the *battery*** charging terminal.

The inductance (5) is also connected to a Zener diode (7) which limits the *battery*** voltage and to a filtering diode (8) which uses

the induced current for charging the *battery*** when the chopping circuit (4) cuts out. The chopping circuit (4) input is derived and controlled from a regulating device (9) which responds to the *battery*** instantaneous voltage and to a fixed voltage reference.

1/5

Title Terms: VEHICLE; ELECTRIC; GENERATOR; VOLTAGE; REGULATE; POLYPHASE; ALTERNATOR; ELECTRONIC; CHARGE; CIRCUIT; REGULATE; *BATTERY***; VOLTAGE
 Derwent Class: Q17; X11; X16; X22
 International Patent Class (Additional): B60R-016/04; G05F-003/18; H02J-007/14; H02K-021/22

58/7,DE/102 (Item 51 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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003610111

WPI Acc No: 1983-F8306K/198318

Monitoring motor vehicle three-phase generator - involves monitoring all *three*** phase *windings*** for matching phase voltages
 Patent Assignee: BOSCH GMBH ROBERT (BOSC)
 Inventor: MEYER F

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3140313	A	19830428			198318	B
FR 2514580	A	19830415			198320	
GB 2110018	A	19830608			198323	

Priority Applications (No Type Date): DE 3140313 A 19811010

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3140313	A		6		

Abstract (Basic): DE 3140313 A

The monitored three-phase alternator forms part of a motor vehicle electric system. All *three*** phase *windings*** (UV,VW,WU) of the alternator are monitored, in order to detect whether the phase voltages, generated in the windings, match. The monitor has an evaluator circuit (35), *series***-connected to an indicator (32). Three comparators provide the mutual comparison of the voltages appearing at the phase windings.

Preferably the evaluator circuit is in *series*** with the starter switch (31), which is directly connected to an accumulator *battery*** (SB). The system provides indication of the operational state and possible defects of the alternator. To each winding is coupled an excitation current diode (16-18), linked to a joint connecting point (D+) of an excitation *coil*** (20), controlled by a clocked power transistor (21).

1/1

Title Terms: MONITOR; MOTOR; VEHICLE; THREE-PHASE; GENERATOR; MONITOR; THREE; PHASE; WIND; MATCH; PHASE; VOLTAGE
 Derwent Class: Q17; X13; X22
 International Patent Class (Additional): B60R-016/02; H02H-003/26; H02H-007/06; H02J-007/14

58/7,DE/103 (Item 52 from file: 350)
 DIALOG(R)File 350:Derwent WPIX

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003361198

WPI Acc No: 1982-L9223E/198236

Three-speed AC machine three-phase pole-change winding - has first-phase *coils*** divided into sub-*coils*** with equal number of turns, but varying sense of connection

Patent Assignee: DARTAU A A (DART-I)

Inventor: DARTAU A A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 879711	B	19811107			198236	B

Priority Applications (No Type Date): SU 2779769 A 19790613

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 879711	B		11		

Abstract (Basic): SU 879711 B

Three-phase pole-change winding switchable to *three*** pairs of *windings*** (P1,P2,P3) and contg. (Zk) *coils*** per phase which are so divided by five leads into four sections that on each section the nature of the switching varies as from P1 to P2 and from P1 to P2, has greater universality for use on ac machines.

For high utilisation of a three-speed motor at all speeds by ensuring phase symmetry when the number of pole pairs satisfies the relation $Zi = 3(\text{to the power of beta}) \times \alpha_i$, where beta is an integer or zero and α_i is a multiple integer of 3, the *coils*** in the first phase are divided into subcoils in which the number of turns is the same, but connected opposingly or concordantly according to their ordinal number.

In the first-phase m.m.f. polygon shown, the *coil*** ordinal numbers are a *series*** with *coil*** m.m.f. vectors (*Fc***). The vectors (AX, BY, CZ) are resultant phase m.m.f.s. reduced by a factor of (2Pi). Given the position of the vector (AX) and a mixed connection of *coils*** according as Zi is even or odd, the angles between vectors can be made such that the m.m.f. vector angle is $2\pi/3$ in all phases.

Bul.41/7.11.81

Dwg.1/2

Title Terms: THREE; SPEED; AC; MACHINE; THREE-PHASE; POLE; CHANGE; WIND; FIRST; PHASE; *COIL***; DIVIDE; SUB; *COIL***; EQUAL; NUMBER; TURN; VARY; SENSE; CONNECT

Derwent Class: X11

International Patent Class (Additional): H02K-003/28; H02K-017/34

58/7,DE/104 (Item 53 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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003102011

WPI Acc No: 1981-L2060D/198143

Voltage regulator system for vehicle generator - has timed signal generating circuit initiated by engine starter signal

Patent Assignee: NIPPONDENSO CO LTD (NPDE)

Inventor: AKITA Y; ITOH K; MASE A; MORI K; MUTO K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4293811	A	19811006			198143	B

Priority Applications (No Type Date): JP 7847545 A 19780420

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 4293811	A	4		

Abstract (Basic): US 4293811 A

The system comprises a generator (1) and a voltage regulator circuit (2). The generator (1) is of a well-known type and has Y-connected *three*** phase armature *windings*** (3), a field *coil*** (4) and a full wave-three phase rectifier (5). The voltage regulator circuit (2) includes a well known type switching circuit such as a Darlington transistor (6) the collector-emitter path of which is connected in *series***, with the field exciting *coil***, a voltage detecting circuit (7) for detecting a *battery*** voltage to control the switching circuit constituted by Darlington transistor (6), a signal generating circuit (8) such as a monostable multivibrator which generates a low level voltage signal of a predetermined period or a timed signal when a starter switch, in this case a key switch (12) having an ignition terminal IG and a starter terminal ST is switched back to the IG position after it was switched into ST position, rise-up voltage detecting circuit (9) for detecting the rise-up of the engine or generator to interrupt the timed signal transmitted from the signal generating circuit (8) and a switch driving circuit (10) for driving the switching circuit (6) into conduction in response to the timed signal.

The period of the timed signal is determined so that the engine may start operation to drive the generator while the timed signal is generated, one to five seconds for instance.

1

Title Terms: VOLTAGE; REGULATE; SYSTEM; VEHICLE; GENERATOR; TIME; SIGNAL; GENERATE; CIRCUIT; INITIATE; ENGINE; START; SIGNAL

Derwent Class: X13; X22

International Patent Class (Additional): H02J-007/16

58/7,DE/105 (Item 54 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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002298046

WPI Acc No: 1980-A4478C/198002

Interlocked battery jumper cable assembly - has two normally opened switches with two pairs of jumper cable *lengths***

Patent Assignee: GIUFFRA W E (GIUF-I)

Inventor: GIUFFRA W E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4180746	A	19791225			198002	B

Priority Applications (No Type Date): US 78957752 A 19781106

Abstract (Basic): US 4180746 A

The jumper cable which can only interconnect a pair of storage *batteries*** in *parallel*** with each other includes a support member with two normally opened switch elements mounted on the support member.

Two *lengths*** of jumper cable are mounted w.r.t. the support member to define a pair and two other *lengths*** of jumper cable are also mounted w.r.t. the support member to define a pair.

The two normally open switch elements each have three electrical connections and each is responsive to the normal *voltage*** of the storage batteries when applied between the first and third electrical connections. Thus to automatically interconnect the first and second electrical connections.

Title Terms: INTERLOCKING; BATTERY; JUMPER; CABLE; ASSEMBLE; TWO; NORMAL; OPEN; SWITCH; TWO; PAIR; JUMPER; CABLE; *LENGTH***

Derwent Class: V04; X12; X13; X16; X22

International Patent Class (Additional): H01R-003/02; H02H-011/00; H02J-007/34

58/7,DE/106 (Item 55 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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002187301

WPI Acc No: 1979-L7255B/197951

Control device for electromagnet - has *battery*** supplying magnet *coils*** and circuits signalling correct or incorrect operation

Patent Assignee: LITTWIN A K (LITT-I)

Inventor: LITTWIN A K

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2919782	A	19791213			197951	B
US 4208656	A	19800617			198027	
DE 2919782	C	19860807			198632	

Priority Applications (No Type Date): US 78914744 A 19780612

Abstract (Basic): DE 2919782 A

The device has a battery, a switching unit and a main circuit connecting in *series*** the *battery***, the electromagnet and the switching unit. There is a signalling device in the switching unit indicating correct *voltage*** and current in the main circuit.

There is an electronic circuit with signalling devices in *parallel*** with the *battery*** and operating systems in the electronic circuit, it responds to the *voltages*** or currents not reaching the specified values in order to trip the signalling device.

Title Terms: CONTROL; DEVICE; ELECTROMAGNET; BATTERY; SUPPLY; MAGNET;

*COIL***; CIRCUIT; SIGNAL; CORRECT; INCORRECT; OPERATE

Derwent Class: V02; X12; X24

International Patent Class (Additional): G08B-021/00; H01F-007/18

58/7,DE/107 (Item 56 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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002076946

WPI Acc No: 1978-90023A/197850

*Electrolytic*** *cell*** connector - with multiturn *helix*** connected by clips and screws to anode and cathode connectors (NL 4.12.78)

Patent Assignee: DIAMOND SHAMROCK CORP (DIAS)

Inventor: POHTO G R

Number of Countries: 006 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 2823589	A	19781207				197850	B
NL 7805863	A	19781204				197851	
US 4105529	A	19780808				197851	
SE 7806197	A	19781227				197903	
JP 53149175	A	19781226				197906	
FR 2393083	A	19790202				197910	

Priority Applications (No Type Date): US 77801579 A 19770531

Abstract (Basic): DE 2823589 A

An inter cell connector to produce a *series*** circuit between each anode connector and the nearest cathode connector of a great number of *electrolytic*** *cells*** distinguished by great flexibility in all modes of flexure. It requires a less critical alignment of the cells and combines simplicity with low cost.

The connector consists of a *helix*** with *many*** *turns*** and an axis halfway between the *parallel*** to the anode and cathode connectors. Pairs of clips are coupled to the *helix*** and are connected by screws to the anode/cathode connectors and to the terminals.

Title Terms: ELECTROLYTIC; CELL; CONNECT; MULTITURN; *HELIIX***; CONNECT; CLIP; SCREW; ANODE; CATHODE; CONNECT

Derwent Class: E36; J03; V04; X25

International Patent Class (Additional): C25B-009/04; H01R-025/00

58/7, DE/108 (Item 57 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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001898690

WPI Acc No: 1978-C7931A/197814

*Voltage*** test system insulating housing - has inner casing and outer protective jacket, with *batteries*** *parallel*** to inner casing axis

Patent Assignee: GRIS M (GRIS-I); INT PATENT & LIZENZ (ITPA-N); IPA INT PAT LIZENZ (IPAI-N)

Inventor: GRIS M

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 2742647	A	19780330				197814	B
FR 2365805	A	19780526				197825	
DE 2742647	B	19801016				198043	
GB 1583012	A	19810121				198104	
IT 1084420	B	19850525				198618	

Priority Applications (No Type Date): FR 7628571 A 19760923

Abstract (Basic): DE 2742647 A

The housing for the test system has a contact sensor (35) at its top. It consists of an inner casing, a protective jacket and an insulating rod. It comprises a cylindrical or prismatic protective jacket (2) which is closed on one side. Its *length*** exceeds its dia., and the shape of the inner casing (1) is adapted to the inner shape of the jacket (2). It has batteries (19/1-19/4). They are arranged parallel to the axis of the inner casing and provided with

grooves.
 Title Terms: *VOLTAGE***; TEST; SYSTEM; INSULATE; HOUSING; INNER; CASING;
 OUTER; PROTECT; JACKET; BATTERY; PARALLEL; INNER; CASING; AXIS
 Derwent Class: S01; V04
 International Patent Class (Additional): G01R-001/06; G01R-015/02;
 G01R-019/16; H05K-005/02

58/7,DE/109 (Item 58 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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001530767
 WPI Acc No: 1976-K3704X/197643

Electronic cold start system for engine - has power transistor in parallel with series resistance *coil*** of *battery***

Patent Assignee: MASSON J C (MASS-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2294336	A	19760813				197643 B

Priority Applications (No Type Date): FR 7441938 A 19741213

Abstract (Basic): FR 2294336 A

The electronic starting system is for use with a spark ignition vehicle engine, there being a resistance *coil*** in *series*** with the *battery***. A power transistor (1) is connected in parallel with the resistance, an electronic device rendering the power transistor passive when the *voltage*** of the battery falls to a value below that necessary to ensure correct engine ignition. The base of the power transistor is connected to the collector of a further transistor (4) and controlled by an earthed resistance (5), transistor (4) itself having controlled by a further transistor (6) which is blocked when the circuit is at normal *voltage*** and unblocked when the *voltage*** of the battery falls below 10V.

Title Terms: ELECTRONIC; COLD; START; SYSTEM; ENGINE; POWER; TRANSISTOR; PARALLEL; SERIES; RESISTANCE; *COIL***; BATTERY

Derwent Class: Q54; X22

International Patent Class (Additional): F02P-003/04

58/7,DE/110 (Item 59 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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001498765

WPI Acc No: 1976-G1685X/197628

HV generator having several stages - generates oscillating test circuit *voltages*** using capacitor batteries, chokes and switch sparking

Patent Assignee: SCHRADER W (SCHR-I); VEB TRANSFORM RONTGEN (VTRA)

Number of Countries: 004 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 119681	A	19760505				197628 B
DE 2550995	A	19760930				197641
SE 7514537	A	19761018				197645
DE 2550995	B	19780706				197828
CH 604190	A	19780831				197837

DD 119681 B 19800213

198020

Priority Applications (No Type Date): DD 184889 A 19750320

Abstract (Basic): DD 119681 A

The high *voltage*** generator of several stages is designed for oscillating test circuit *voltages***. It consists of a series circuit of stages containing capacitor *batteries***, choke *coils***, switch sparking sectors and loading resistors. The loading *voltage*** and an electrode of a single switch sparking sector are found in each stage at the connecting point between two capacitor *batteries*** coupled in *series***. The second electrode of the switch sparking sector is coupled to the output of a first capacitor battery via a choke *coil***. Between this second electrode and the output of the second capacitor *battery*** a choke *coil*** and at least one actual resistor are provided. The chokes and their associated capacitor batteries are so dimensioned that they have differing resonance frequencies.

Title Terms: HV; GENERATOR; STAGE; GENERATE; OSCILLATING; TEST; CIRCUIT; *VOLTAGE***; CAPACITOR; BATTERY; CHOKE; SWITCH; SPARK

Derwent Class: S01; U21; U22; U23; U24; X12

International Patent Class (Additional): G01R-031/12; H02M-007/44; H02M-009/04; H03B-011/02; H03K-003/53

58/7,DE/111 (Item 60 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001477798

WPI Acc No: 1976-E0706X/197618

Cancer cell decomposer or early warning detector - using high frequency, rectifier magnetic fields and piezo crystal pyramids

Patent Assignee: HANSCHMANN H (HANS-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2457792	A	19760422			197618	B

Priority Applications (No Type Date): DE 2457792 A 19741021

Abstract (Basic): DE 2457792 A

The current is used from *fuel*** *cells*** with flowing *electrolytes*** and permanent magnetic fields using gas electrodes with nickel or lead etc. catalysts each with an insulated dividing layer of porous carbon or other current generator which is wound onto the primary winding of an inductor. A circuit breaker is provided as is an electrolyte or molecular capacitor with a dielectric layer of carbon black or condensed metal vapours in molecular form in liquid plastics or oil. The high frequency, low voltage, rectified currents are passed over the secondary *coil*** of a *few*** *windings*** of thick wire to electromagnetic *coils*** thus producing strong magnetic fields.

Pyramids with piezo-crystals in them or piezo-ceramic material are used in conjunction with quartz crystal oscillators which amplify the natural crystal oscillation in the pyramid and control its intensity.

An excitation system for laser equipment is also described.

Title Terms: CANCER; CELL; DECOMPOSE; EARLY; WARNING; DETECT; HIGH; FREQUENCY; RECTIFY; MAGNETIC; FIELD; PIEZO; CRYSTAL; PYRAMID

Derwent Class: P34; S05

International Patent Class (Additional): A61N-001/42

58/7,DE/112 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
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135125041 CA: 135(9)125041b PATENT
Cylindrical secondary lithium batteries
INVENTOR(AUTHOR): Koishikawa, Yoshitada; Takazuka, Yuichi; Suzuki, Katsunori; Hironaka, Kensuke
LOCATION: Japan,
ASSIGNEE: Shin-Kobe Electric Machinery Co., Ltd.
PATENT: Japan Kokai Tokkyo Koho ; JP 2001210382 A2 DATE: 20010803
APPLICATION: JP 200015184 (20000125)
PAGES: 5 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: H01M-010/40A; H01M-004/02B
SECTION:
CA252002 Electrochemical, Radiational, and Thermal Energy Technology
IDENTIFIERS: secondary lithium battery electrode stack structure
DESCRIPTORS:
Battery electrodes...
coiled electrode stacks with controlled stack diameter to electrode length ratio in cylindrical secondary lithium batteries

58/7,DE/113 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)
(c) 2005 American Chemical Society. All rts. reserv.

129262816 CA: 129(20)262816y PATENT
Method and apparatus for winding length pieces
INVENTOR(AUTHOR): Uemura, Yasuhiro
LOCATION: Japan,
ASSIGNEE: Mihashi Seisakusho K. K.
PATENT: Japan Kokai Tokkyo Koho ; JP 98270058 A2 ; JP 10270058 DATE: 19981009
APPLICATION: JP 9768820 (19970321)
PAGES: 10 pp. CODEN: JKXXAF LANGUAGE: Japanese CLASS: H01M-006/02A; H01M-006/14B
SECTION:
CA252002 Electrochemical, Radiational, and Thermal Energy Technology
IDENTIFIERS: lithium battery electrode coiled stack manuf
DESCRIPTORS:
Battery electrodes...
method and apparatus for manufacture coiled electrode stacks for lithium batteries

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